

**UNDER THE SUPERINTENDENCE OF THE SOCIETY FOR THE
DIFFUSION OF USEFUL KNOWLEDGE.**

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By Order of the Committee,

THOMAS COATES, *Secretary.*

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THE
QUARTERLY 1839

JOURNAL OF EDUCATION.

ON UNIVERSITY EDUCATION.—OXFORD.

(Continued from No. I.)

IT is very difficult to convey to a stranger an accurate idea of Oxford as a place of education. Its institutions are many and various, owing their origin to different periods; and as, in some cases, they have been applied to the purposes of education in a way never contemplated by the founders, the whole no more resembles a regularly planned university, than some venerable château, converted into military quarters, would resemble the barracks which an engineer would project. Some of the most honourable and best appointed portions, perhaps, are those which, in their original design, were appropriated to subordinate uses; whilst others that were once conspicuous—the state apartments as it were—have become, in many instances, mere appendages, preserved chiefly for their antiquity, and the prescriptive right of being there.

One, especially, who has been familiar with a foreign university alone, is perplexed by the very prepossessions he has thus acquired. He hears, for example, of numerous *professorships*, and concludes that to these he must direct his attention, in order to ascertain the source and machinery of instruction; because, in foreign universities, professors are the chief instructors. The mention of college tutors, perhaps, comes across his view of the professorships, and adds to this false impression respecting them, by producing a confusion of thought between university and college offices. Then he hears of public examiners and masters of the schools.—What are these? Accounts of lectures meet him in every stage of inquiry, and here is confusion worse confounded. A lecture, in the original and ordinary meaning of the academical term, signifies something *read*. Most of the Oxford lectures are totally different things: whilst some again are, strictly speaking, such didactic discourses as were called lectures in earlier times, and are still so called in those uni-

versities which retain that form of instruction exclusively. He is told, perhaps, that the university lectures are principally of the one kind, the college lectures of the other ; but this explanation only plunges him once more into his original confusion between college and university. Attempt to explain the office of college tutors, and it is ten to one that he blends your description with that of a numerous class, sanctioned, indeed, although not recognized by Oxford—the *private tutors*. The difference between the *collections*, or *terminal* examinations, established by each separate college and hall, and the *public* business of the schools, is, in like manner, explained, only for the explanation to be again and again called for, in reply to some new form of question, until the *cicerone* gives up all hope of conveying, and his charge of carrying away, any accurate impressions, unless both are blessed with more than an ordinary share of patience and zeal in imparting and acquiring information. No one, in short, who has not had to 'lionize' a Swede or a German, whose stock of English words and English ideas just serve him to pick his way through a social chit-chat, can be aware how the aggregate difficulties, of which only a small portion have been enumerated, baffle the officious kindness of those who undertake to place before him an intelligible outline of an English university system. But all this takes place, though in a minor degree, if the stranger is an Englishman not brought up at Oxford or Cambridge.

The best mode, perhaps, of so directing the inquiries of a stranger, whether English or foreigner, that he may avoid all this perplexity, is to state, in the first instance, what is meant by *the university*, what by a *college* or *hall*—one of those societies, or separate schools of education, which, all combined, form the university. The statement of this is simple enough. Oxford is, in fact, an establishment for purposes of *education*, which corresponds to a federal body united for *political* purposes. As, in this latter case, the several States have separate jurisdictions, separate duties, and, to a certain extent, separate interests, so the several colleges and halls which compose the academical body—the united colleges—have each its own private rules and regulations for the education of its members, but combine all, as a body, to contribute to that which is the university education. Each separate society may particularly encourage some particular branches of learning more than another, or may convey its instruction by a different method ; but all look to that qualification which is agreed on by all as the object of the united body—the university.

In the next place, let it be understood that it is in the

course of study thus sanctioned and required by the *university*, and not in the course adopted by any colleges separately, that the *Oxford education* properly consists. The establishment of such a system of training as is requisite for the first degree is, in fact, that which constitutes Oxford a *university*—that is, a place of *education*, as distinguished from a mere place of study. If (to be more explicit) Oxford afforded all the *facilities*, which it now does, for learning the ancient languages and the various branches of elegant literature and science, and tutors and professors gave separate testimonials of proficiency in the several branches, the value of these testimonials would be quite distinct from that which is now claimed for a degree-testimonial. They would imply no more than proficiency in certain studies specified by the several certificates. What an Oxford degree now indicates is, that the graduate is instructed, not specifically in this or that particular branch of knowledge, but *generally*. In other words, it is not a testimonial of attendance on particular courses of teaching, but a testimonial of having received that instruction which, taken altogether (*in universum*), constitutes, according to the decision of Oxford, an educated man. This, at least, is the case with respect to the degree of Bachelor of Arts, which is, accordingly, the main degree to be contemplated in taking a survey of the university education. There are likewise, it is true, degrees in the several faculties, of which some notice will be taken presently; but these (with the exception of the degrees in music) *presuppose the university education* to have been attested by the previous step of B.A., or (what amounts to the same) by testimonial for it.

It is obviously, then, the key to the whole inquiry into the Oxford education to know what it is that the university, *as such*, requires—what are the subjects of its public examinations, how they are conducted, and what proficiency entitles the candidate to a degree, or to some class or mark of distinction higher than the mere degree. Next, and in connection with this, we should examine the plan of instruction which the several colleges adopt; this latter being necessarily shaped in reference to the public examinations. Under this twofold division, then, of Public Examinations and College Preparation, the details which we are about to give of the Oxford system of education will be arranged. But before we enter on these details, we must draw the reader's attention aside for a moment to some features in the scene, which it will be more convenient for him to notice at once.

Oxford we compared, in the opening of these remarks, to some antique edifice, parts of which have been converted to uses not contemplated in the original building. This is a

pretty correct representation. In its early constitution, and in the gradual additions which for many ages were made to the great machine of public education, the model now exhibited in the universities of Germany, for instance, was kept in view. Thus professorships, or readerships, in the different arts and sciences were established; and these, together with some of more modern date, although no longer the main sources of instruction, are, in many instances, very efficient, especially in respect to those branches of study which are excluded from the requisites for a degree. Such, for example, are the professorships of Hebrew and of chemistry. At the same time, the object which the university now accomplishes by means of these professorships, as well as by the public honours and rewards for particular branches of knowledge, independent of the degree-examinations, falls under the view of *facilities* afforded, *encouragement* given to study, but is no part of its system of *education*. One who gains a prize, or who profits by attendance on the chemistry lectures, is honoured by the university, and has derived instruction provided by the university, but neither the acquirement nor the mark of distinction reckon towards his degree. His testimonial of having been educated by the university, and of having satisfied the university of his proficiency as one of its educated members, is quite another thing. In short, the account of what Oxford does in this way, makes part of the answer to the question—What *may* a student learn at Oxford? But the information respecting the degree-examinations and the method of preparing for them, is the reply to the question—What *must* a student learn in order to be educated at Oxford?—What is required in order to obtain from the *degree-examiners* either a bare testimonial or a place of honour? Many of the *facilities* and *encouragements* of particular branches of knowledge do, however, harmonise with and advance the *system of education*, as will appear from the following statement of them.

The prizes, for example, are given for the encouragement of composition, in prose and in verse, in Latin and in English; and proficiency in all these points enters into the qualification for the simple degree or the honorary degree *. These prizes are annual, and five in number. There is one for the best English and another for the best Latin prose composition on a given subject, and a third for the best English essay on some theological question. These are restricted to Bachelors of Arts, or, at least to those of standing for that degree, and not beyond that standing. There are two more, one for the

* By this name, for want of a better, we denote a degree accompanied with an honourable distinction. It is sometimes called simply 'obtaining a class.'

best copy of English verses, the other for the best copy of Latin verses, on a given subject ; and these are restricted to under-graduates, or rather to those who are not yet of standing for their degree. All the subjects are proposed in June or July, and the decisions take place in the May of the year following. The successful compositions are then recited by the prizemen at the commemoration, or great annual festival in act-term, which closes the academical year, and is followed by the summer (or *long*) vacation.

There are also public scholarships, which operate in a similar way, as *rewards* and *encouragements* of general proficiency or particular acquirements. Of these the Vinerian, or law scholarships, are conferred by the votes of convocation, in reference to general merit ; whilst the Ireland are adjudged, by a board of examiners specially appointed, to the best candidates, after a strict examination in Greek and Latin scholarship. The Craven scholarships, again, are, with some restriction in favour of founder's kin, bestowed on classical merit. There are likewise scholarships for Hebrew and others for mathematical proficiency, both of which will probably produce as marked effects on these respective studies as the Ireland scholarships have on philological pursuits. These, however, are but newly instituted, and not yet, indeed, brought into operation. For the Hebrew the university is indebted principally to its present liberal Regius professor ; the others have been established through the joint contributions of colleges and individuals.

Together with these *encouragements* which stimulate to study, the university affords *facilities* for the acquirement of various branches of knowledge, as well of those which do not, as of those which do, enter into the qualifications for a degree. The several professors of geology, chemistry, and many other subjects excluded from the public examinations, are always provided with a class, often with a numerous one. Nor are the professors of those branches, which the university includes among the studies for its first degree, necessarily unemployed. It may seem at first sight, indeed, that the demand created by the public examinations would operate on these especially ; even as a Hebrew scholarship must increase the Hebrew professor's classes by exciting numbers to the study of that subject. But this is not altogether the case. The demand for instruction that is created by the degree-examination is met, almost exclusively, by lectures delivered in the several colleges and halls, or rather by private college and hall *tutoring* ; so exclusively, indeed, that although some knowledge of Greek is essential for any degree, and a considerable pro-

ficiency for the higher class degrees, the Greek professor has no lectures. On ancient history, indeed, and on moral philosophy, the respective professors do deliver regular courses of lectures; nor are the indefatigable exertions both of the Regius professor of Divinity and of the Savilian professor of Geometry, superseded by the circumstance that each separate college provides lectures on these subjects.

For all further information respecting the professorships, public scholarships, prizes, and other endowments, which we have classed under the general description of *encouragements* and *facilities* for learning, we refer the inquirer to the Oxford Calendar, and proceed to the main point—the statement of those studies which the university requires that its educated members should have pursued—the proficiency in these necessary to entitle the candidate to his testimonial of education—the method adopted for ascertaining this proficiency—and, lastly, the mode of training the student for his examination.

The present examination-statute requires that the candidate for the degree of B.A.—the *education* degree—should display some acquaintance with the facts and doctrines of the Christian religion, and especially with the peculiar tenets of the Church of England, as set forth in its articles—some proficiency in the Greek and Latin languages—in one or more of the ancient philosophical treatises, or, in lieu of this, in a portion of ancient history—some knowledge, also, either of the elements of logic or of the elements of geometry.

For the mode of ascertaining the requisite proficiency in these several points, the examiners are left, in the main, to their discretion. Some specific directions, however, are given. The candidate must be tried in translating from the original language of the Gospels. His acquirements in Latin and Greek must be proved by examination in at least three different authors; of which, however, the historical or philosophical work, in which he is examined as to his knowledge of ancient history or philosophy, may make one. It is further required specifically that part at least of this examination should be conducted orally, and that the examination in religion should be, in part at least, always so conducted. The main object contemplated in this latter rule is to familiarise the future candidates with the test to which they in turn must be subjected. It has also an obvious tendency to stimulate and control the proceedings of the examiners themselves, by bringing them more immediately under the inspection of the university at large. And hence, with a view to prevent the system from sliding at any time into a mere secret tribunal,

every candidate is obliged to present a certificate of having been present throughout one day's examination; and so strictly has this regulation been enforced, that, although it has formed part of the statute for nearly thirty years, only one dispensation has been granted, and that under the express understanding that it was not to be converted into a precedent. At the same time, the principle on which it is founded cannot be said to be universally approved. The benefits of having part of the inquiry, at least, oral and public, are too obvious indeed to be altogether overlooked; but objections are still raised by some, on the ground of the greater facility with which a mere paper system might be conducted.

So much, then, of the detail of examination is specified; but by far the greater part is left to the discretion of the examiners, and not a little in practice to the option of the candidates. The examiners are entrusted with the adjustment of the standard of proficiency, and with the further process of ascertaining this proficiency in each case by means of translations, particular questions, and other modes of trial both oral and in writing. The candidate, again, is permitted to name his books, subject, however, to the approval of the examiners, who are, besides, left at liberty to examine *any* candidate in whatever classical authors they may think fit. The following may serve as a specimen of the ordinary lists admitted by examiners—Logic; Virgil; Cicero de Officiis; the five latter books of Herodotus; Porson's four plays of Euripides.

The above statement applies to those candidates who aim at no more than barely to satisfy the requisitions of the statute. The statute, however, contemplates a much higher standard of qualification as always likely to be exhibited by a portion; and for these it provides, accordingly, honours additional to that of a mere degree, and gives directions respecting the award of such honours. It provides, for example, that the names of those who are found deserving of these extra honours should be printed, arranged in four classes; not, indeed, on a principle of mere relative merit as displayed at each examination, but according to a fixed standard of merit for each class: it may, therefore, happen, and has actually happened, that either a higher or a lower class should be vacant. The names in each class are arranged alphabetically. It has repeatedly been proposed to alter this part of the system, by arranging them in order of merit; but a considerable majority has always been opposed to this change. In favour of it, it has been urged that candidates of very unequal merit are often placed in the same class,

without any mark of distinction between them. To this it has been replied that the same objection, virtually, would lie against the other plan also; since the first man, one year, would perhaps be hardly equal to the second or third of another year. But the objection altogether seems hardly worth considering; since if A. and B. are each excited to *do their best*, though their ultimate attainments be unequal, the *object we have in view* is accomplished.

It may, however, sometimes happen that a man of very superior powers will relax his exertions when he has made sure of a first class, because he can rise no higher; whereas, if the order of merit were adopted, the fear of a rival would keep up his efforts. It is, however, no common case for a man to have attained the security here supposed: on the other hand, it might often happen that a man of superior powers would be withheld altogether from being a candidate for honours, if he doubted or despaired of *standing first*.

On the whole, the fairest statement, perhaps, of the two plans is, that the one tends to raise emulation to the *highest* pitch among a *few*; the other to *extend* its influence to the *greater numbers*. It is we presume from a preference of the latter object that the present plan has been retained.

In ascertaining the qualifications for these several classes, the examiners are left, as is reasonable, very much to their own methods of inquiry, the specifications of the statute on this head being, for the most part, specified permission to use their discretion in cases which might admit of its being questioned. They are, for instance, expressly permitted to call on the candidate for honours to illustrate his several subjects of examination, by reference to modern literature. As to these subjects, however, there is one restriction peculiar to the examination for the classes—the candidate is not allowed, as in the case of a mere degree, to substitute anything else in the place of a system of logic.

The mention of the discretionary power of the examiners suggests the notice of other things concerning them:—their number, mode of appointment, and respective duties, as well as of the arrangements adopted by them, under the direction or permission of the statute, for conducting the examinations.

The total number for the classical and mathematical departments is seven. They must be approved in convocation, and none are eligible who have not attained the degree of M.A. or B.C.L. Twice a-year, in the Michaelmas and Easter Terms, they are engaged in their duties. These commence with a division of the candidates; all such as are supposed, from the lists of books they present, not to be candidates for

the first three classes, are summoned first into two separate schools, in which all the examiners are indiscriminately employed. The qualifications for the mere degrees and for the fourth class of honours being thus decided on, the examiners then separate into the respective schools to which they are elected—three to the mathematical school, and four to the school of *Literæ Humaniores*; and the candidate for extra honours is then examined in one or the other, or in both, according as he aims at a classical or mathematical class, or at both.

It would be impossible to convey by a description any exact idea of the proficiency requisite either for the mere testimonial, or for the several stages of further distinction. Some notion may, however, be formed of it from the materials of examination and the exercises performed. A specimen list of the books of the least ambitious candidates has already been given. For the highest honours in classes, the catalogue usually comprises two or more treatises of Aristotle, with the addition occasionally of some of Cicero's, or some parts of Plato—Herodotus and Thucydides, and often the whole or part of Xenophon's *Hellenics*, and Polybius—a selection of Greek plays, and sometimes Pindar—a portion of Latin history, most commonly two decades of *Livy*—two or more Latin poets, which are almost always either Virgil, Horace, Lucretius, or Juvenal. Besides the actual examination which the candidate undergoes in these books, he has exercises to perform in English, Latin, and Greek, in prose and in verse, at the discretion of the examiners.

The mathematical examinations have been, for the last three or four years, conducted principally by means of printed questions, answered in writing. The extent to which these go, and to which the candidate for a first class must have pursued the subject, may be stated generally as follows:—
I. The elements of analytical geometry and trigonometry.
II. The differential and integral calculus and its applications, to the extent comprised in the treatise of the Savilian professor of geometry. III. Mechanics, as in the treatise by Mr. Walker of Wadham, which includes the principles of its application to the solar system, embracing the *substance* of the three first sections of Newton's *Principia*, which are also read in the original forms. IV. The principles of hydrostatics, optics, and plane astronomy; but the questions in these last sciences are not considered of such essential importance as those in the former. Part of Bland's *Hydrostatics*, Wood's or Coddington's *Optics*, and Maddy's or Brinkley's *Astronomy* are usually read.

It will be evident, even from the statement that has been given, that the examination, whether for a mere degree, or for the extra honours of a class, is very far from being, according to a vulgar notion, an examination only in the Latin and Greek languages. It is true that some acquaintance with these languages is a part of the requisite knowledge, and that great proficiency in them is encouraged and rewarded ; but not without reason ; for, independently of a knowledge of Greek, at least, being necessary for the study of the New Testament—independently, too, of the manifest advantage of studying the principles of grammar by a comparison of other languages with our own, these particular languages are the vehicles of such instruction as might indeed be conveyed through modern authors, and in our own tongue, but which would not, in many respects, be so advantageously conveyed. In the formation of the student's taste, for example, by directing him to dwell on the specimens of ancient classical poetry, and other elegant literature, the models proposed to him may be inferior, possibly, to the models furnished by modern literature ; but still, supposing this so, the classical models must always be better for the purpose, simply because they exhibit to him a *fixed standard of taste*. Were the literature of the Greeks and Romans less excellent than it really is, the circumstance of Greek and Latin being now dead languages—being no longer subject to the fluctuations of caprice and fashion—and thus affording a steady object for the student's mind to contemplate, is an advantage which would still entitle it to preference for the purposes of education. It is a question of the same kind, as whether a young artist shall be taught by being set to copy objects in motion or objects at rest.

These languages, again, are the vehicles of the most important historical information ; and although it may be urged that the student may, with a saving of time, acquire the same through translations, or be better employed in making modern history his prime study—on the other hand, the utility of having gone through the experiment, as it were, of actually examining *some* of the ancient records, for the greater part of which he may, perhaps, nevertheless be content to derive his information from others, is not to be lightly regarded. The student is required to learn the ancient languages, not merely indeed for the purpose of reading ancient history in the original authors, but of applying it to this amongst many important purposes ; and this application of it places him in as different a position, with respect to those portions of ancient history which he may learn from modern authors, as

he is who reads a description of experiments made in natural philosophy, after having witnessed experiments, compared with one whose *only* knowledge of such experiments has been obtained from written description.

Again, viewing the Oxford examinations as tests, not of particular branches of knowledge, but of *an educated man*; and considering, likewise, that one indispensable requisite of this education is a knowledge of the Christian evidences, there is a propriety in the study of ancient *heathen* ethical writers, rather than of the modern systems of Christian philosophers, which should not be passed over. The student of Christian evidence is instructed to rest the claims of the Gospel religion partly on the purity of its moral teaching. Now to send him, at the same time, to Christian writers for that view of ethics by which he is taught to try the Gospel morality, would be in great measure to nullify the evidence. As it is, besides the intrinsic value of such a treatise as Aristotle's Ethics, for example—besides the salutary exercise of mind which the accurate study of it involves—the heathen writers' views bear witness to the claims of Christianity—the heathen *book* to the New Testament.

In the course of these statements, occasional allusion has been made to changes which the examination statute has recently undergone, and to others of no very distant date. It may appear from this that the university is, and has long been, labouring under all the evils of a shifting system—that the students must be for ever doubtful and insecure of the objects they are to aim at; and that the perpetual attempts at correction and improvement constitute a greater defect than any to be remedied by them. This, however, is very far from being the case. The new statute of 1800 did indeed introduce an entirely novel system. But the condition of Oxford then greatly needed this wide departure from the existing course; and this very necessity arose from the previous neglect to make *gradual* alterations, so as to keep pace with the changing character of the university. But even this statute, by being allowed due time for coming into operation, occasioned no great inconvenience either to candidates or examiners. Since that period, however, the alterations have not been alterations in the principle or general tenor of the examinations, but in the details—in such points as can never have perplexed or disappointed any candidates who were regularly preparing themselves in accordance with the then existing statute; and, however slight these alterations may have been, some interval has always been allowed to elapse before they have been brought into actual operation.

The last changes, for example, were agreed on in convocation 1830, and were not acted on until the Easter term of the present year.

Of these last-mentioned alterations no more need be said than that the main object of them was to facilitate the process of examination ; and that, in pursuance of this object, the examiners have been allowed, in several respects, more discretionary power. The necessity of some change had become more and more pressing, in consequence of the difficulty there was to procure examiners for the Literæ Humaniores school ; and the changes in the statute may be considered as an experiment, adopted principally with the view of obviating this difficulty by lessening the demand on the time and trouble of those examiners. Whether it will accomplish this, is even now, however, a question with many whose practical experience of the schools entitles their opinion to regard ; and, accordingly, whilst these changes were under discussion, many printed papers were circulated, which, however at variance with one another, indicated a pretty general mistrust of the efficacy of the scheme that has been adopted.

We fear we have been tediously long on the subject of the examination for the degree of B.A. Its importance, however, as the main-spring of the Oxford system of education, has induced us to dwell on it more at large than will be requisite in the sketch which we shall next give of the degrees in the higher faculties, as they are called, before proceeding to describe that training for the public examinations, which takes place in the several colleges and halls ; for the degree of Master of Arts is at present obtained without any examination or exercise whatever. This, though by most good judges acknowledged to be a defect, is one for which no remedy has yet been suggested, likely to meet with general approbation. But we are decidedly of opinion that *no* degree whatever should be conferred on any one, except as a testimonial of some kind of proficiency in *something* exhibited by the candidate.

The degrees in the higher faculties, that is, the degrees of Bachelor and Doctor in Divinity, Law, and Medicine, are no further connected with education than as they may be considered in the light of encouragements and inducements, which the university holds out for the attainment of a certain proficiency in the several studies to which they refer. They can hardly, however, be regarded even as producing any results in this way ; and are, in fact, the remnants of an earlier system of education which has long since been abandoned. At the time when these gradations of literary rank were esta-

blished, and for so long as they served the purpose designed, they marked the progressive steps which the individual made in the several kinds of learning. The university then undertook, not merely the office it now assumes of educating and preparing one to *enter on* any professional study, or to mix in the polished ranks of society, but beyond this to provide *professional instruction*—to instruct for the professions of divinity, of law, and of medicine*. The Master's degree, which was as now a necessary preliminary to the divinity and medical degrees, at least, was the point of general education, from which the student was supposed to diverge into some particular path of professional or other pursuit. The exercises and tests of proficiency in these higher departments were then uniform with those employed for ascertaining the qualifications of candidates for the degrees in arts, and consisted of public disputations and *opponencies*, in which the candidates displayed their acquaintance with the subject by controverting the positions of each other, and by replying to such questions as the graduates, in their respective faculties, chose to put to them during the period of their trial. What was the form of public examination naturally became also the mode of training for it; and it is not long since, in one college at least, divinity exercises were kept up according to the old forms. Such then being the familiar practice of the university, in respect of its students of all denominations and of all its different degrees, the candidates came prepared, by uniform training, from their degrees in arts to this mode of examination for a degree in the higher faculties; and such, we believe, is still generally the case, or very lately was, in some foreign universities. But the form of examination for the degrees in arts having been changed, the change naturally produced a revolution in the system of training throughout the university; and the exercises for the higher degrees have thus become unsuited to the preliminary education—unconnected with the previous habits of study and examination to which the candidate has been accustomed. One of two results was necessary—either that the exercises for the degrees in the faculties should be commuted for some method of examination harmonizing with the new system of teaching, or that the obsolete exercises should be regarded as mere forms, and the degrees conferred without reference to any proficiency made by the students beyond that of which they had before given proof for their degrees in arts. The

* See No. I., p. 13.

latter has been the course hitherto adopted. In law and in medicine, the only requisite, beyond the degree of M.A., is the time during which the name of the candidate must be on the university register, and the discharge of the appointed fees. In the divinity school, indeed, an attempt has of late been made to render the old *pro forma* exercises a real test of proficiency; but even this has been done, not by the proper authority—that of the university—but by a private regulation of the Regius professor. Whether from unwillingness to encroach on the province of the university as a body, in so delicate a decision as that which determines who those candidates shall be on whom the university is to confer its theological degrees, or from whatever cause, this attempt, however, has not effected any essential departure from the old forms. The only change is, that the disputationes are in English, instead of being as heretofore in Latin; and that the objections and replies are made to be (as far as is practicable) the genuine questions and replies of the candidates, instead of a string of ready-made controversy, furnished by those who made a trade of these exercises, and transferred from one generation to another. It must be allowed, too, that whatever advantages this innovation may promise when contrasted with the degenerate practice for which it has been substituted, it is a form of exercise no longer in keeping with the main examination, and consequently with the early studies of the candidates. Independently of this, too, if it does operate in giving a new impulse and direction to the divinity studies of Oxford, it may be questioned whether the habit of looking to skill in religious *controversy* as the test of theological attainments—whether the necessity of every candidate, in turn, maintaining a *false* position—whether the injury which may sometimes be done to the vital truths of religion from the ill-matched powers of the disputants, and from the misapprehension or partial hearing of that large portion of the audience, the under-graduates—be not positive evils, greater even than the absence of any effectual test. It is highly probable, however, that this attempt of the professor to introduce some change—which must, at all events, be allowed as an evidence of his zeal and good intentions—may lead to some measures, on the part of the university, which shall do for divinity (perhaps, too, for law and medicine) that which has been already done for arts. Examiners will in time, perhaps, be formally delegated, and a system marked out by the university, for ascertaining, as in the case of degrees in arts, the requisite qualification of candidates for these higher degrees, which, if

understood by the public as expressing the decision of the university, ought not to be otherwise given. The present Regius professor having given, as he considers, a fair trial to the mode of procedure we have been describing, has laid before the university, we understand, a statement of his opinion as to the result ; and it is believed that he recommends an entire change of the system.

The degrees in music are an anomaly in the Oxford system. They are conferred without any reference to a previous degree, or examination for a degree in arts ; and are always preceded by a trial in the public schools allotted to this purpose. In speaking of these degrees as anomalous, we are far from meaning to imply any censure on a system of conferring degrees for acquirements not connected with or presupposing the course of university education. Indeed it might be desirable that many other branches of knowledge should be thus encouraged by Oxford ; and this might consistently be done, so long as Oxford combines with the office of accomplishing the educated man that of encouraging eminence in particular pursuits, and of advancing the pursuits themselves. Similar degrees might, with advantage to the university and to science, be granted for proficiency in mathematics, over and above the place which that study holds in the general system ; in which, though encouraged by honours, it is (very properly) not allowed alone to entitle a candidate to a degree in arts. Degrees might again be conferred in botany, chemistry, geology, and other pursuits ; and these degrees would, of course, as in the instance of those in music, be understood abroad as differing in their character and purport from those which imply the preliminary progress through arts.

We have now arrived at the most important part of our survey, and, at the same time, that which can perhaps be least understood from a mere description—the process by which each college or hall trains its members to undergo the test of being *educated*, in the university sense of that term ; in other words, the college preparation for the public examinations. It is this that really constitutes the Oxford education. The public examination is the *main-spring*, and the college exercises the *movements* of the great machine. It is to the former exclusively, it will be observed, that the university directs its attention, and very wisely. Once establish an efficient system of trying the qualifications of candidates, and the candidates will be sure, even of themselves, to find instruction. Let a university take care of its examinations, and the studies will take care of themselves. In Oxford,

however, that which would be less uniformly and judiciously, and certainly less easily, effected by the individual efforts of the under-graduates to obtain instruction and to qualify themselves for the public examination, is made the especial concern of each society in Oxford, which undertakes to provide its under-graduate members with this requisite preparation.

How is this done? Let the stranger to Oxford imagine a long table, spread with books, maps, or mathematical diagrams, as the occasion may require, and thronged with students, generally from the age of sixteen to twenty-one; and at the head of this class, (usually from five to fifteen in number,) a master of arts presiding, and conducting the business; and he will have before him a picture of the most essential and the every-day business of a college or hall—a college lecture. Every head of a house appoints a certain number of tutors for lecturing its own members. They are not, however, lecturers, in the ordinary signification of the word. We have seen in what the public examinations consist; and these college lectures are only the drill exercise and preparatory practice for them. If the subject of the lecture be a classical author, the several members of the class are called on in turn, to translate a portion; questions are put by the tutor, as occasion offers, and remarks are made by him, on points of grammar, philology, and criticism, as well as on the subject-matter of the book, whether it be history, philosophy, or poetry. At the same time, directions are given, as often as may be needful, respecting the mode of preparing for these lectures, the books to be consulted, method of analysing and illustrating, and the like. If the lecture be on any branch of mathematics, a similar process of putting questions, and giving directions, is pursued; and so also with respect to all other studies which are requisite either for a simple degree or for the further distinction of a class. By far the most usual, and also the most approved practice, is for each student to attend two, three, or even four tutors,—each lecturing in a different branch of literature or science; by which means one great advantage of the division of labour is obtained.

But the duties of the college tutor do not terminate with these class lectures. He from time to time has interviews with his pupils separately, for the purpose of ascertaining more exactly the individual's state of preparation for his public examination, consulting with him on the most effectual methods of removing his peculiar difficulties, arranging generally his plans of study, or directing his ambition to this or

that particular object. In doing all this, however, (which constitutes the province of a *tutor* as distinguished from a mere *teacher*,) the college tutors are not the sole labourers in Oxford. Although recognized neither by the university, nor by any particular college, as part of the Oxford system, a very numerous class has long existed in the university, who, under the denomination of *private tutors*, superintend and assist the studies of individuals. Without superseding or interfering with the operation of the college lectures, these are occupied rather in securing for the student the best use of those lectures, in so preparing him for attendance on them as to enable him readily to answer the lecturer's questions, and follow him in his remarks; and in giving him assistance, perhaps, in those portions of his studies in which accident may have precluded him from receiving the assistance of a college tutor. These private tutors, therefore, although not necessary to the student's progress, nor universally resorted to, are still highly useful to several descriptions of students, but especially to that large class who come to Oxford insufficiently and partially prepared for entering on the studies of the place; who have, in short, to acquire at Oxford, as well as they can, the greater part of what ought to have been taught them, and which their parents probably supposed them to have learnt, at school.

The course of college and hall lectures closes, at the end of each term, with a formal examination of each member, separately, by the head and tutors, who assemble for this purpose. This summing up of the business of the term is called, in the technical language of the place, *collections*, or *terminals*. The scrutiny occupies from two days to a week, according to the size of the college or hall. Each student presents himself, in turn, with the books in which he has been lectured during the term, and in many colleges, with the essays and other exercises which he has written, his analyses of scientific works, abridgments of histories, and the like. The main difference between one society and another in the mode of conducting the collections is, that whilst in some the students are required to present for their examination some book in which they have *not* received lectures during the term; in others, the examination is strictly confined to a review of the business done at lecture, and under the superintendence of the college or hall authorities. Some colleges attempt to combine the two objects, by examining the students at collections, in any extra studies which they may have had leisure for pursuing, in addition to the lectures. It is obvious, that in those arrangements there are two different, and perhaps

discordant, principles acted on. The object contemplated in the collections which are confined to an examination of the student in the regular business of the term, is to secure from him a constant attention to the lectures, by the prospect of an examination in them being always close at hand. The exclusion of all, besides these lectures, from the subjects of the examination, makes this object the more sure, because it takes away the student's chance of making up for the neglect of them by the display of acquirements irregularly made in his private studies. This method, in short, is the most effectual for accomplishing one important object of college tuition—the student's adoption of the course marked out for him by his college. It forces him, by means of a moral restraint, into the college discipline, and checks that desultory and injudicious application of talent which young and ardent minds are so apt to make. It prevents the student from pursuing too exclusively the studies for which he may have the strongest inclination and the most decided turn, instead of submitting to be trained in such as are the more requisite for the formation of the intellectual character, from the very circumstance that the natural turn is not for these. On the other hand, the requisition of something more than the lecture-subjects of the term, or of something in lieu of them, is not without its apparent recommendations. It seems calculated to stimulate those who are qualified, by superior talent or preparation, to go beyond the regular routine of college business, which is of course marked out in reference to the average ability of the several classes—perhaps even lower than this—and thereby to make up for the apparent disadvantage of sailing, as it were, under convoy, and being occasionally obliged to *lie to* for those who are lagging behind, and detaining their free course. It would be unnecessary, after this statement of the different ends proposed in the two plans, and the means by which they are respectively pursued, to offer any opinion as to which is better.

Not the least important feature of college training remains yet to be noticed. It is the practice of writing weekly short essays on a given subject, occasionally interchanged with a copy of Latin verses, for those skilled in versification. The efficacy of this weekly exercise, as an instrument of education, must of course depend on the judicious selection of such subjects as may lead the student from the stringing together of phrases and common-place sentences to an actual discussion that is interesting to himself, and thence an exercise to his mind. Much, too, must depend on these essays being regularly returned to the writers, each with such observations

as shall not only form his crude opinions, but also point out his defects whether in matter or in style, and suggest the most likely methods of removing them; with nicely-measured praise also, and censure—at all events, with marks enough on each exercise to show that it has received an attentive perusal from the censor. Such is the plan pursued in those colleges and halls which estimate highly the practice of theme-writing; and all allow it at least a place in their system. In some, the composition is alternately English and Latin; in others, Latin alone. No one, however, but a witness, can be fully aware of the difference between the habits of composition acquired by men of apparently equal calibre, in the course of a few terms, according as the attention has been directed or not, to the discussion of subjects which really interest the writers, instead of vague common-places about abstract notions of virtue and vice, happiness and glory; and according as the writers have or have not received constant correction, encouragement, and advice, however slight—even if no more than enough to make them feel that they are writing to be read; that they are addressing themselves to one who will attend to them and reply to them, and that one a person whose remarks have the weight of authority.

In addition to these modes of direct instruction, which every college and hall appoints, the liberality of benefactors has provided them very generally with the means of indirectly promoting the studies of the place by premiums in the form of exhibitions, scholarships, and fellowships. As in the case of the university—the public body—of which each is a component part, the colleges are thus entrusted with the means of encouraging eminent acquirements; and, in some instances, as, *e. g.*, in the instance of the Hebrew scholarships at Wadham, the encouragement extends to subjects that make no part of the necessary Oxford education. Many of these endowments, unfortunately, are hampered in their operation by some restrictions in the donor's will—by the scholarship or fellowship being confined to natives of a particular county, or even parish, or to those educated at particular schools; and although, in some instances, these restrictions have been relaxed, on the plea of compliance with the spirit of the bequest, yet they continue to form one of the main impediments with which the spirit of improvement in Oxford has to contend. These endowments are for the most part confined to colleges. The halls have no fellowships, nor are they corporate bodies; but some small exhibitions have been left to

some of them; *i. e.*, to the *university*, for the benefit of members of this or that hall.

The mutual relation which has been now shown to exist between the public examination appointed by the university, and the instruction provided by the several colleges and halls, naturally leads us to one more inquiry respecting the Oxford system. As that system has been thus far represented, it appears that the university—the federal body—having to grant, as such, the certificate of education, assumes, as is reasonable, the province of deciding on the qualification of the candidates, and does not leave to each separate college the business of determining who of its members are or are not fit;* but delegates the office of making the necessary scrutiny to public examiners. It might be expected, in like manner—as the matriculation of new members is an act not of the several colleges, but of the university, and as the enrolment of the name which entitles the member to the privileges of the university is made on the university register, and accompanied by certain public forms and requisitions—that the qualification of the candidates for *admission* would likewise be determined, not by the several colleges, but by the university that admits them; and that public examiners would be appointed to pronounce, in each instance, whether the candidate is so qualified. This is not, however, the case. Every college and hall examines, if it thinks fit, its own candidates for admission, and pronounces, each according to a standard of its own, on their fitness or unfitness for the university. At the same time, the university may be considered as interfering, in some degree, in these private decisions, by the appointment of a public examination called the *Responson*, for members who have been matriculated not less than six, and not more than nine terms—for members, in short, who have proceeded about half way in their progress towards that examination, which is to decide their claim to the testimonial of a university education. This examination, which is conducted by public officers called *masters of the schools*, is confined to a single Greek and a single Latin author, a portion of Euclid's Elements (not less than three books) and Logic, which may be either added or substituted for the latter. It is conducted, moreover, principally with a view to ascertain the *elementary* knowledge of the student,

* New College is an exception to this rule, the fellows of it being examined for degrees by their own college. This apparent privilege is deeply lamented by many members of that college, as excluding the great majority from all chance of obtaining the principal university honours, and thus depriving them of all the benefits of emulation.

rather than his progress in those branches of knowledge which he is supposed to be pursuing—his preparation, in short, for the studies of Oxford, rather than his proficiency in them. This is indeed apparent from the restriction laid on the subjects of examination. Such an examination is plainly, therefore, no part of the test for ascertaining the qualifications of a candidate for a degree, but only of his fitness for pursuing those studies which are to qualify him: it is an inspection of the arms and accoutrements, rather than a review of the manœuvres in which the use of them is displayed. The *responsions* were substituted for some old exercises in the form of logical questions and *responses*; but are no otherwise connected with these forms, and are, in fact, so obviously applicable to the purpose which has been explained, that the previous existence of those old exercises, at that stage of the student's progress, requires to be stated, in order to account for these initiatory examinations taking place, not (as would seem natural) on the *admission* of a member, but from his sixth to his ninth term. It has accordingly been proposed by some to remove it nearer at least to the matriculation; but the proposal has not hitherto met with the concurrence of the majority of the university. Some again have proposed to *divide* the *responsions*, keeping the scientific part of the examination—whatever, in short, relates to the studies which may be supposed to have been commenced *at Oxford*—where it now stands; and to place earlier that more elementary grammatical examination for which the student ought to have been prepared at school. If this should ever be made to precede the matriculation itself, and to determine the admission of candidates to the privileges of the university, it would doubtless stimulate the schools throughout England in the same manner as the examinations for the degree have been found to act on the several colleges and halls in the university. Few will be hardy enough to maintain that such a stimulus is not needed.

As it is, our schools are exposed to the full force of a temptation which, more or less, besets every place of education;—the temptation to neglect the great mass of the students, and bestow whatever pains *are* bestowed on a *few* who promise to obtain high distinction. To qualify one hundred youths to fill usefully and respectably their stations in some confined sphere is far more toilsome, and rewarded with far less credit in the eyes of the world, than to expend all one's care on one or two who are likely to make a figure, while all the rest are neglected. The excellence of any school is usually measured by the number, the absolute number, of

prize-men or *class-men*, &c., that it has sent out, without any inquiry being made what becomes of nine-tenths of those (nominally) educated at it. Boasts of this kind might be met by the reply of Bias the atheist, to those who triumphantly showed him the votive tablets of those whom the gods had saved from shipwreck—‘Where are the pictures of those who were drowned?’

Schools, as we have said, are exposed to the *full* force of this temptation. In colleges it is checked by the circumstance that, as it is a credit for its members to gain honours, so it is a disgrace to have any of them altogether *rejected*. This tends to secure a due share of attention to the great mass of students; and the same advantage, in the case of schools, would be obtained by the proposed examination. It will be obvious that, in the foregoing survey, the university of Oxford has been considered solely under that one aspect which strictly comes within the province of this Journal—as a *seat of education*. Many topics, accordingly, of interest and importance—many, too, connected with the advance of science and literature, have been either omitted, or else slightly alluded to, for the sake of giving prominence to the main feature which we have been attempting to delineate. The influence of its libraries—its common-room society—its pulpit, might have been introduced, perhaps, not unfitly into the account; as well as other matters more remotely affecting the intellectual character of the place. But enough has been probably stated to satisfy ordinary curiosity respecting the real state of its *education*, and the main instruments of it which are at work.

One statement further, however, it may be useful to make, respecting the *expense* attendant on this course of Oxford education. On no one point relating to the university is there so much misapprehension abroad. It is not uncommon to hear it asserted that an Oxford education costs the student from two to three hundred a-year, and in many instances considerably more. Now, it is very true that students *at* Oxford do often spend such incomes; but it is not the *education*—it is not the board and lodging, much less the instruction, and the privilege of keeping terms, that cost this. It is spent, whenever it is spent, in the indulgence of those habits for which parents are content that their sons shall pay, whether at Oxford or elsewhere—in keeping a horse, perhaps, dressing expensively, entertaining friends with breakfasts, or wine parties, with expensive desserts, and the like; not to mention the extravagance into which a heedless or ill-disposed young man is likely, in any place where he may be residing, to

carry expenses which a parent or guardian intends that he shall indulge in with moderation. All this is so far from being peculiar to the habits of the student at Oxford, *as such*, that as long as he is resident, he is subject to restraints on his expenditure, both from the university statutes and the surveillance of his particular hall or college, from which he is, of course, free elsewhere. The ordinary *college account* for the year, including university and college fees of all kinds, postage, boarding, lodging, washing, coals, and servants, oftener falls short of 80*l.* or 90*l.* than it exceeds 100*l.* The habits of the students are certainly more expensive than is convenient for all who might come, and who might afford to pay the necessary demands; but these habits do not arise out of the demands of the university or of the several colleges and halls.

ON THE ENGLISH UNIVERSITIES.

By the late Dr. A. H. NIEMEYER*, Chancellor of the University of Halle.
(From Niemeyer's Travels in England.)

WERE I asked the result of my opinions as to the comparative merits of the universities of England and Germany, after personal and local inquiries, I should be forced to acknowledge, that the longer I meditate upon the subject, the greater is the difficulty I feel in forming any accurate conclusions. The country itself, the national character, the future destiny and mode of life of the individuals who study in England, are so intimately blended with its systems of education, and present so dissimilar an aspect in the two countries, that an unconditional transfer of the schools or universities of either to a foreign soil, could never be recommended. I have also remarked, that among all classes in England, there is a considerable number of intelligent and scientific men who have never received a university education.

Those who are not blindly attached, as indeed too many of us are, to the pristine forms of German institutions, or are not so devoid of reflexion as to confound the jocund career of their academical years with the legitimate ends of scholastic life, will not fail, on an impartial review of the systems of Oxford and Cambridge, to acknowledge that they present, in many of their features, much that is estimable; nor will they be able to suppress a wish, that parts of them might be transplanted to our own schools. On the present occasion, I must, however, limit myself to a few brief observations.

* These observations of Dr. Niemeyer we think it better to give as they are, without comment, for the consideration of those concerned in English universities.

In the first place, I conceive it to be a great acquisition to the major part of those who have just quitted the school-room (some, indeed, at a very early period of life), that the prosecution of their studies under experienced persons is not suddenly checked, and that the acquisitions they have made in seminaries are not laid almost wholly upon the shelf by an instantaneous transition to the higher branches of science and learning. There is not one-third of *our* young academicians,—and I challenge any one to show that I have not even underrated the numbers,—there is not one-third of them who dream of a continued study of the ‘ *Literæ humaniores*,’ than which there are no means so eminently calculated to exercise and cultivate the mental faculty ; nay, there are but too many who consider it beneath them to retain even the possession of their classical books. Most of them float with the popular stream, which carries them away to prelections, the very name of which is—frequently beyond their comprehension ; and, in this way, a youth of shallow parts or uncultivated understanding finds himself listening to subjects which the wisest of his companions is scarcely competent to digest. There are no regulations made to prevent him from entering on his academical career when unqualified ; and indeed the veriest dolt never finds the door closed upon him.

In the colleges of an English university, the course of instruction has immediate reference to, and connexion with, that which obtains in the English schools, and the youth, though raised in rank, finds himself pursuing his former occupations. His mind ripens in the same soil which nurtured its first expansion, instead of being transplanted into a hothouse, where, though it may shoot up rapidly, it will too often bear no other fruits but those of empty and profitless acquirements. None but individuals, who, like myself, have passed a long series of years in close connexion with high schools, and have had a continued experience of academical examinations, can feel such deep reason for deplored that so vast a multitude out of the thousands, whom we have seen pressing forwards to their *Alma Mater*, should have taken part in prelections from which it was morally impossible for their minds to derive any salutary nutriment whatever. How few of them will suffer themselves to be advised to devote their first year to classical learning, or the lighter preparatory studies in philosophy ! And, even were they inclined to listen to such advice, how few of them are there whose time—and much more whose pecuniary resources—would allow them to follow it.

This topic reminds me of another advantage peculiar to the English universities. Whatever may be the inequalities of condition among their frequenters, the most scantily provided student, excepting, perhaps, the class of *Servitors*, is by no means so entirely destitute of pecuniary means as the great bulk of our German academicians. In England, the mere pauper will shrink from the idea of entering upon collegiate pursuits, or, if he do venture to follow them, he is so liberally supported by the aid of rich endowments, that he is elevated far above the chilling poverty which humbles so many of *our* academicians to the dust, and leaves them often destitute of the commonest necessities of life. Though there may be instances in which these impediments and difficulties have been surmounted by strength of mind, extraordinary perseverance, an inextinguishable desire of knowledge, or consummate address and industry in profiting by every little advantage which has fallen across the aspirant's path, yet such instances of eminent individuals rising superior to the pressure of the deepest poverty, can only be regarded as exceptions to the general rule. On the contrary, if we contemplate those whose destination is to pursue an academical course under such circumstances, we shall discover that their poverty of spirit, their illiberality of sentiment, their coarseness of manners, their eagerness after some employment which may administer to their necessities, and their want of love or taste for science, are an inevitable consequence of the effect of abject poverty on the earlier years of education,—a poverty, which, in England, is deemed an insuperable bar to the dedication of a child to a learned life. I know that there are institutions, such as Christ's Hospital in London, where the poorer classes of boys, who possess eminent abilities, receive a scientific education. But such as these are so liberally provided for, that they cease to rank in the class of paupers from the moment they are elevated to a condition which enables them to look forward with certainty to the ease or affluence of laical or clerical appointments.

I remarked a *third* advantage inherent in the course pursued at the English universities during the first three or four years. It springs from that peculiar distribution of time by which many more hours are left for labour and composition in the privacy of the domestic study, than is the case with us. The English student is obliged to read, write, translate, and recollect much, independently of extraneous aids: hence, as he advances in years, he becomes familiar with the whole body and spirit of the ancient writers; which, in schools, are

seldom read or elucidated otherwise than by piecemeal. He is obliged to *work himself* (if we may use the expression) into an acquaintance also with the elements of history, mathematics, and philosophy. A variety of prizes for the best essays, discourses, and poems, serve also to keep alive a spirit of emulation; and he is under the necessity, moreover, of rendering an account of his labours. How seldom do such points as these receive attention under *our* system! Who is there that gives himself any concern about the individual industry of his pupils? Or how would such inquiries be practicable under the circumstances in which the German professor is placed? And how small is the number of those who frequent scholastic classes or repetitions! Amongst ourselves, the *industrious* are those who spend from five to seven hours a day in listening, and then writing down what they have heard,—too often, alas! under the pressure of disadvantages which are fatal to intellectual vigour or discernment. In this way, the impression made at one hour is obliterated by some totally different object presented in the next. As to any investigation of the subject lectured upon, or any attempts at essays or original composition, which give wings to reflexion, and teach youth to express their thoughts with ease and precision,—these are points with which none but the select few concern themselves. It must be evident, that such a system must overload and surfeit the strongest intellect, on the same principle that an exuberant sowing makes one germ choke another, and effectually prevents the single shoots from taking deep root, or ripening to a healthy maturity.

Yet, on the other hand, the English student exchanges the indisputable advantage of an animating and alluring delivery on the teacher's part, for the privilege of forming his *own* judgment, and being left at the mercy of his doubts and apprehensions. Mightily, indeed, has the 'life and soul' of men, who have proved themselves masters in their peculiar department, transfused itself at all times into the breasts of their crowded auditories; and happily, indeed, has the breath of this spirit survived in after hours. The disciple has borne an indelible mark of the school in which he has been formed: for the master-mind is always the creator of a school. Is it necessary to point at such scholars as Wolf, Kant, Heyne, Morus, or Ernesti? But, in England, it is only at certain intervals that some eminent professor, such as a Lowth or a Blair, comes before the public with a series of profound and finely-wrought essays. This is the whole extent of his exertions; and with them terminates his short-lived course. It

were well if many of *our own* classes went beyond the mere drawl and whine of reading and dictation !

There are many objects of lecturing altogether neglected in England. In this department the German university has decidedly the advantage ; nor less so, in regard to scientific institutions, in which we greatly excel the English. It may, however, be questioned, whether our universities do not present a classification of the sciences, which is far too extensive to be comprehended in a bare three years' course, and whether a condensation of them would not be productive of more solid benefits ? A *universitas literarum* must exult in the *opportunity* of teaching *every* branch of learning and science. I cannot help thinking, however, that many students, from being destitute of a helm's-man, grasp in an early stage at *too much* ; and this excess, under the disguise of polymathy, degenerates into a diseased state of superficial attainments, the next step to which, after a certain point is reached, consists in total stagnation. It is, in every branch, a leading characteristic of English industry to keep *one single object* in view, and to prefer a state of partial ignorance to a scanty and imperfect acquaintance with a multitude of objects. It is possible that this may spring from an indifference towards the diffusion of general knowledge. It may also frequently engender narrow and partial views of things ; but it must as often prove the source of depth and solidity of judgment.

I have observed, on a former occasion, that the *Academical Discipline*, peculiar to English universities, singularly contrasts with the spirit of indecision which forms so striking a feature in the German. With us, one hour is marked by ill-timed harshness, and the next by pernicious moderation : if we are apt to display our awkwardness in carrying statutes into effect, we are equally apt to betray a want of skill in dealing with the waywardness of youth ; we are tied down to a tedious course of judicial proceedings, where a summary process would spare the sacrifice of many a valuable hour, and act as the preventive of many a greater evil ; our system undergoes yearly revision, which brings with it incessant change of views and principles ; we are the creatures of an ignoble subserviency to prejudices, which have nothing but their antiquity to recommend them, whilst they are anathematized by the law and favoured by popular opinion ; we too often court applause and favour by pusillanimous forbearance ; but there is not one of those evils which press upon us with so heavy a hand as the *absence of public spirit*. These are the principal sources of a vexatious and constantly-recurring occurrence of scenes which are infinitely disgraceful to a seat

of learning. Such evils are unknown under the immovable forms and regulations which characterise the constitution of the English universities. It is naturally felt to be the interest of those to whom is committed the government of a commonwealth, where everything tends to the furtherance of intellectual improvement, and where so many religious and scientific edifices perpetually recall to mind the goodly purposes to which the spot is dedicated, that *external* peace and good order should be maintained. The means of upholding this enviable state exist in abundance ; whereas, in the German universities, they are but scantily provided. Küttner, who lived a long time in England, and particularly in Oxford, assures us ' that disorderly conduct, arising out of the association of the students with the lower classes, broils with mechanics and others, and assaults upon the townsmen, are quite unknown ; and that, if any disturbance arise from inebriety, it is always laughed at, but never magnified into an affair productive of public commotions.' The respective factions of the Whigs and Tories may have their partizans, but these are found rather among the graduates than the younger class of students. The greatest statesman of his day, William Pitt, who became Chancellor of the Exchequer at the age of two and twenty years, followed no vocation but that of learning and science when an under-graduate.

In the straightforward conduct of the executive, and the undeviating enforcement of the statutes, the *Vice-chancellor*, whose office is but annual, is powerfully supported by the *Proctors*, who are his immediate assistants, and responsible to the whole university for the maintenance of the public peace. It is such a system as this, of which the value is so sensibly felt by the most estimable portion of the students ; whilst, on the contrary, that very portion, in *our* universities, is too often trodden under foot by the insolence of those who prefer tumult to study, and are permitted, if not encouraged, to disturb the even current of academical pursuits. Whether the austerity of the English system ' breeds a slavish spirit, weakens self-confidence, and obstructs the free development of the noblest of human powers,' as some persons have thought fit to insinuate, I shall leave every one to determine for himself. Where, I would ask them, does thought roam more unshackled, or the tongue deliver its expression with bolder energy ? Still, an intelligent German writer has not remarked, without some show of reason, that ' although we frequently see sound scholars sent forth from the monastic institutions of the English, we more frequently see them produce morose and untoward subjects ;' and it must be

admitted that, if the student of a German university be not too much depressed by his necessities, and be sufficiently versed in the art of self-government, he leads a freer and blithsomer existence, and will reckon the years of his matriculation among the fairest of his earthly career. But, will it be alleged that a truly free and liberal spirit in *after life* is most discernible in that class which, during their academical course, have had nothing but the cry of liberty between their lips? Do we not, when following many an academical hero into the labyrinth of social life, find him the most humble, spiritless, and dependent of his class? Do we not often see those who, in the days of their juvenile impetuosity and enthusiasm, indulged in visionary schemes of freedom, which can never coexist with social order, exercise the most unfeeling and relentless tyranny over their dependents? This, at least, is certain, that, so long as academical laws do not impose narrow and vexatious restraints on the vivacious minds of youth, and so long as they do not convert their natural liveliness (across even the excess of which scintillations of a generous spirit may be discovered) into a statutory crime, they cannot prove a galling yoke to any human being who is seriously devoted to the cause of learning and morality. It is indeed most true—and the example of the most inexorable of republican governments may be our warrant for the assertion—that it is only under the protection of laws, which admit of no departure from them either to the right hand or the left, that *genuine freedom* can ripen to maturity.

The extraordinary fermentation which has been engendered by the commotions of the last forty years, has given currency to ideas which, if well digested and judiciously applied, may produce a noble harvest. They have already eradicated much that was corrupt. The years of youth, however, are the years rather of power than reflexion; and power becomes a perilous element, unless confined by rule and measure. For this reason, many a regulation may evince a provident wisdom on the part of the legislative power in Germany which is quite uncalled for in England. Let us hope that those who possess the ears of sovereigns may not instil into their minds a want of confidence towards the rising generation. The youth who is not utterly debased and lost possesses, on the whole, an inherent disposition to follow the right path. Industry is his best shield against aberration from it; and other follies will be corrected by nearer acquaintance with the school of life. Every day's experience teaches us that he may greatly err; but, at the same time, that from those who beguile and bedim his early ways a heavier account will be exacted.

ON THE METHOD OF TEACHING FRENCH IN ENGLAND.

If we are asked for what purpose is the French language studied in England, the answer, we should imagine, is plain: —it is for the purpose of understanding the language either written or spoken, and of speaking it ourselves with tolerable ease. But is the attempt generally successful? We think not; and there are good reasons why it should not be successful, which we shall endeavour to point out, while at the same time we suggest some remedy for the evil. We might say increasing evil,—because, during the war, emigration secured us a number of teachers, who, if their method of instruction was not always the best, still understood their language, and were well acquainted with its literature. But now we are often compelled to have recourse to teachers of inferior education and acquirements, whose deficiency in the exact knowledge of their own language and literature is not, *in general, compensated by any improvement in their methods of teaching.* Besides this, there are but few good elementary *books for teaching the French language.* All these are serious obstacles in the way of improvement; and we shall, therefore, say a few more words on this subject before we explain our notions about improved methods.

Our two ancient universities have hitherto enjoyed the almost exclusive privilege of imposing on the country their own system of education. In their academic course they have, perhaps, wisely limited the objects of pursuit, thinking that what the English youth lose in variety of knowledge, is more than counterbalanced by the solidity of their acquirements in particular branches. Hence it happens that, while classical learning and mathematical science are pursued with ardour proportionate to the rewards held out, many branches of knowledge, some highly useful and others indispensable, remain without encouragement, and are consequently neglected. This is the case with modern languages. There are many young men, who yearly leave our universities as graduates, who are not able to translate, even with tolerable accuracy, an ordinary French author. The university system has its effect on the schools, and particularly the great schools, which are but so many hotbeds, in which young plants are raised, in due time to be transplanted to the fields of Alma Mater. In many of the great public schools, French is not a necessary part of the course of education; in some it is hardly tolerated; and in private schools in general it is taught in a most inefficient manner. As a proof of this,

how many, we may ask, leave school, after learning French for some years, utterly unable either to speak French or even understand it when spoken? Let us enumerate some of the more prominent parts of the way in which the learning of French is made a job of; for that is the word which most accurately expresses the fact. Sometimes the head of an establishment will charge each pupil from four to six guineas per annum for French, giving the teacher a much smaller sum; in other cases, the French teacher is also an usher, with a small salary, and the master gets French out of him for almost nothing, though he does not fail to make the pupil pay pretty dear for the commodity. This usher, who is often considered little better than an upper servant, is frequently a person of a very limited education, who has had little experience in the difficult art of teaching. He is despised by the boys, who can sometimes readily discover his defects, especially if he should be ignorant of Latin, which is so generally taught in our schools; and he is treated with little respect by the master, who imposes his daily duties, without being able to judge of the manner in which they are performed: for it should be remarked that a great many schoolmasters know very little of French, and some are entirely ignorant of it, and therefore unable to judge, even in the slightest degree, of a French teacher's capabilities. But even supposing that the French master is a well-educated gentleman (for such we sometimes see), he is so fettered by the routine imposed on him, that his scholars can reap but little benefit from his instruction. The schoolmaster himself has no method of teaching French; for, as we have remarked, he generally possesses only a very superficial knowledge of the language and still less of the literature. If he should happen to know something of the language, the greater part of it is due to the accident of having travelled in France, and the rest to a bad traditional method of teaching which he continues in his school. In addition to all this, the time allowed for teaching French is seldom if ever sufficient for the purpose; and as it is considered inferior in importance to the ordinary business of the school, the pupils often only turn it into ridicule, and, by a natural transition, the person, also, who is employed to teach it. Another great objection to the present system is this—the pupil while he is learning French, or supposed to be learning it, is not acquiring any knowledge of France or French history and literature. He spends all his time in learning some detached phrases about rain and fine weather, and other subjects appropriate to the climate; and these are often refashioned into something that passes

under the name of exercises. To conjugate French verbs by rote is another part of the system. When a French book is read, it is generally one printed in London, and therefore full of errors in orthography and accentuation, though the right understanding of the latter is of the highest importance. But what do these books generally contain? Nothing but extracts of trifling passages in prose and verse, scraped together from every quarter, without any taste in the selection or useful information in the matter. And even should the extracts be good, we maintain that a language cannot be learned so well by small extracts from different authors, as by studying carefully some one book, which shall interest and instruct the pupil by the matter it contains, as well as by its style and general character.

In many schools, it is true, they do use a single book, but that book is *Telemachus*, a sort of epic poem, without doubt excellent in its kind, but the least adapted for teaching French of any work that we could name. *Telemachus* is, of all books that we are acquainted with, the least consonant with the idiom of the French language, and offers to the learner the least store of pure genuine Gallicisms. Its monotonous superabundance of style soon tires the pupil, who finds only fatiguingly beautiful sentiment, and a number of facts strung together into a story, apparently for no other purpose but to introduce a series of sermons or moral discourses. It is not from such books as these that we choose to learn a modern language when we are old enough to be our own instructors. We take some book that treats of an interesting subject—some geographical description of the country—some historical sketch of it—or some work that treats of an art or science, which we make our own particular study. A similar plan ought to be followed in teaching French in our schools. Though there may be no books of the kind, to which we have alluded, that are perfectly faultless, yet there are some which will answer the purpose tolerably well, till the demand for text-books of that description shall create a supply of new and better books. This is a point on which we would insist most strongly, that, while a pupil is learning the French language, he should use such books as will give him correct information on the geography of France, its political history, and the biography of those men who have most contributed to form a national literature. Some information of this kind may be supplied, in the present want of suitable books, by the master giving lectures in the French language to the more advanced pupils, and requiring them to take down his words as they are pronounced. In this way they acquire a

facility of comprehending the spoken sounds of the language, and are exercised in the writing of it, while at the same time they are acquiring useful knowledge. A further step is, for the master to allow the pupils to take short notes of his lecture, and afterwards to require them to work up in French the substance of what they have heard. The value of such an exercise will be readily allowed by all who are conversant with the teaching of languages, and is well known to those who have tried the experiment.

In establishments for young ladies, French is, in general, not so badly taught, partly because more time is devoted to the subject, and partly because in many female schools it is made and considered to be an important part of the school business. We may, however, remark of female schools, that Molière and Racine are frequently put into the pupils' hands, which would be considered in France an outrage on decorum. It is no doubt done in England from a good motive, but it is a great mistake; for, though Molière and Racine (the latter in point of style) are the Terence and Virgil of France, they ought to be the last books read, and even then such pieces should be chosen as are not objectionable, and they should be studied in a very different way from the present mode, and they should be read in a *French* edition.

With regard to grammars and dictionaries, they form one of the most vicious parts of the system. The grammar is often filled with exercises, framed by a master on his own authority; while, in our opinion, exercises should always be founded on the authority of some established writers. These exercises are also detached sentences, unconnected in meaning and utterly uninteresting, instead of being parts of a continuous narrative, and instructive from the matter which they contain. Besides all this, the chapter of errata would be enormous, if it were ever thought worth while to make one in works intended for instruction in French. As to dictionaries, pocket ones are commonly used, which are not at all fit for pupils; they require something more. The old dictionary of Boyer, which is still used, is very defective, and the best edition, two volumes, quarto, is rarely found in schools. Sometimes we find an abridgment of both parts in one volume, octavo. The dictionary of Lévizac is also much used, which, in general, we should be inclined to commend, although it is very deficient in examples of French idioms. With respect to Chambaud and Descarrières, two volumes, quarto, London, it is in many respects a good work, but very often inaccurate in the English, and also somewhat behind the present state of the French language in what relates to

the more modern and newly established modes of expression. The best edition of this dictionary is the one revised by Boniface and printed at Paris, in two volumes, octavo, which, though the cheapest and most convenient edition, is at present but little known in England.

We have already said that, in many schools, the French master is also an usher, having other things to do besides teaching French. That this is a bad system we have also remarked; and we may add that the majority of these teachers are supplied in a way that does not tend to raise our opinion of their merit. School agents, who are unable to judge of a man's fitness for teaching French, are the providers who furnish a great number of schools with teachers, both French and English. When a French master is not in the degraded condition, almost inseparable from ushership as now in practice, he comes, perhaps, twice a-week for an hour, or an hour and a half, each time, and his course of instruction is necessarily not only subordinate to every other object in the school, but also fettered by the school routine in such a way as to be nearly useless. The result is not very different, even if the French master should be a man of superior merit. The best qualified teacher, in the eyes of the great principal, is generally the man who will work for the least money; for the school-master gains the more the less he pays for this branch of instruction. This may be made perfectly clear, thus:—Parents require their children to learn French because it is the fashion; but as they very often take no pains to know what progress their children make, it follows that the master will, as a general rule, get it done for the least that he can, and charge the parents for it as much as he thinks they will consent to pay. The economic criterion of a teacher's goodness is so carefully applied, that we know places where, during three years, we have seen six different masters. Again, in some schools we find an English, or more frequently an Irish teacher, who is required to know French; then the French becomes almost a clear gain to the master; though, we apprehend, the learning of the pupil and the profit of the French teacher are reduced to the lowest amount that united ignorance and rapacity can bring them down to. It is unnecessary to enter into all the minute details of all the various modes in which French is paid for and not taught. But we would add a word of caution to those who engage private teachers for their own families; for they have their time and all other arrangements at their own disposal, and if they can only get a good teacher, and allow him a reasonable portion of time for instruction, they cannot fail

to accomplish the desirable object of making their children familiar with one of the most useful of all European languages.

Teachers are obtained sometimes by advertisement, more frequently through the recommendation of a friend, often less competent than the inquirer himself to judge of the teacher's fitness. The petty love of petty patronage, the fruitful source of so much abuse both in public and private affairs, often induces a person to recommend a man, about whose fitness he knows nothing and has taken no pains to know. For those parents whose children have learned French for a year or eighteen months, we will suggest a few tests, which they may be able to apply, even if they possess a very moderate knowledge of the language, or none at all. Let them ask their children to translate on paper a few pages from some portion of a good French author, who writes in an easy and familiar narrative style. Whether the translation is good or bad English, or expressed in plain and correct or inelegant language, most people who have had an ordinary education may decide. Again, let them request the French master to read aloud and slowly, to their children, some easy narrative which they have not studied, and see if the youthful pupils can follow and understand him; let the pupils also write down, from dictation, some passage which the master reads slowly, and let it be compared with the book, for the purpose of ascertaining its correctness. And, lastly, let the master hold conversation with them in short sentences on some familiar topic, and let the parents observe if the children can understand what is said, and make, at least occasionally, a proper reply. If after twelve months' study, taking three or four lessons per week, this cannot be done by children of average ability, we advise the parents to change their master and get a new one.

Though we have condemned in strong terms the neglect of French, and other modern languages, in many of our schools, and the vicious system on which they are taught in others, we are aware that in many schools, both public and private, things are ordered differently. And this we do not say to temper at all the severity of our remarks, wherever they are applicable, but because we know and can cite cases where very important steps have been taken towards improving the teaching of modern languages. One of the first things to be done is to raise the master in the eyes of the pupils, as a preparatory step towards giving to that which he teaches the degree of importance which its usefulness deserves. At Rugby school the modern language-master ranks in all points with the classical assistant masters, there being no distinction

between them except that of standing in the school ;—the master who has been there the longest ranking before the others, but with no difference of authority or consequence. This master is paid 2*l.* 2*s.* per annum by every boy in the school, of which 12*s.* goes to his assistant master. In the lower forms, as much as three hours a-week are allowed ; in the other forms only two hours a-week for French or any other modern language.

Before going into details upon the method of teaching French which we would substitute for the abuses we have just pointed out, we will make some general observations, in order that the reader may better understand from what point of view we contemplate the subject. The natural faculties of most youths are nearly the same, but the manner in which they are developed in different individuals is widely different. The true dispositions of children are difficult both to discover and to direct ; but instead of attending to the investigation of these qualities, time is employed in teaching children a number of facts, of which many are useless, and many others take up the room of more substantial knowledge. The object ought to be to form the capacity for knowledge rather than to make children learned at once ; this point being once established, they will carry in themselves the means of acquiring any knowledge which may be necessary for their profession or their character in society, as Montaigne says—‘ ie vouldrais aussi qu'on feust soingneux de lui choisir un conducteur qui eust plustost la teste bien faicte que bien pleine.’—*Liv. I., cap. xxv.*

It is of the highest importance to avoid, as much as possible, turning the acquisition of knowledge into a forced task. To make children love study, they must be reasoned with on their own level, and their objections must be encouraged and answered with good nature. The reason why a pupil so often hates his lessons and his master is, because the latter forces the former on the learner, instead of leading him towards them, and endeavouring to make him regard them as being to the mind what his daily play is to the body. To raise the pupil to the height of the master, the latter must first descend towards him, which is very seldom done by those who undertake education in this country. It is not that we recommend instruction to be given in the form of play ; and in this we are supported by the opinion of the celebrated Madame de Staël, who says—

‘ L'éducation faite en s'amusant disperse la pensée ; la peine en tout genre est un des grands secrets de la nature ; l'esprit de l'enfant doit s'accoutumer aux efforts de l'étude, comme notre âme

à la souffrance. Le perfectionnement du premier âge tient au travail comme le perfectionnement du second à la douleur ; il est à souhaiter que les parents et les *mâtres* n'abusent pas trop de ce double secret.'—*Allemagne*, vol. i., cap. xviii.

Again, in order that the master may possess influence over the mind of his pupils, he must himself be well acquainted with his subject. He should be able to supply the place of a book, and indeed to give a great deal of explanation that is not found in books. The pupil should be encouraged to ask questions, and they should be either answered, or some good reason given why they are not answered. But in the ordinary mode nothing is done without a book. It is nothing but book, book ; and why so ? Because the greater part of the masters can do nothing without them. A celebrated philosopher has laughed at the workmen of civilized nations who cannot move one step without a hundred instruments. What would he have said of those masters who cannot move a single step without book and rule* ? In oral instruction, which of all others is the most valuable, there is much to be done that books cannot teach ; the master must do this ; he must be competent to do it, and he must never cease to explain difficulties to his students, and encourage them to ask questions.

The master who undertakes to teach the French language should not only have a perfect acquaintance with the language itself, but also with the most indispensable branches of education, in order that he may be able to suggest such reflexions, and give such explanations, as the subject matter of the book may require. He should never pass from one line to another, whatever may be the subject, without making himself sure that what has been read is *perfectly well understood in every respect*. He should not forget that his pupils are also probably studying the Latin and Greek languages ; and he should therefore explain the etymological connexion of many words with those in the Latin and Greek, and also historical allusions or imitations of the ancient writers. He should take care that every geographical name that the pupil meets with in his lesson, whether ancient or modern, should be known in Latin, French, and English, and pointed out on the map. In what relates to ancient Gaul, Cæsar and Strabo are our principal guides. If a translation be necessary, for the latter the master may use those of Laporte du Theil, Gosselin, and Coraï, and also the critical remarks of Maltebrun. Nor should he be entirely ignorant of the earlier

* ' Il n'y a rien tel que d'allecher l'appetit et l'affection : aultrement on ne fait que des asnes chargez de livres.'—*Montaigne*, liv. i., cap. xxv.

writers of France, particularly Grégoire de Tours, Nithard, the original poetry of the Troubadours, Joinville, and Froissart, in order that he may be able to lay before his more advanced pupils the history of the formation of the language; and, above all, Montaigne, the only writer of his age, who, with Amyot, is still read with delight. It is not necessary to cite authors more modern. He should also be well acquainted with the literary history both of France and Italy, in order that he may be able to connect the modern and ancient languages, and to explain their relationship, since the French language is almost entirely a derivation from the Latin.

Ex.—‘ Gallia est omnis divisa in partes tres,’ &c.

‘ *Tota Gallia est divisa in tres partes,*’ &c.

‘ *Toute la Gaule est divisée en trois parties,*’ &c.

The study of the etymology of the two languages throws light on many historical facts*; we can thus learn things

* To show the progress of the French language, we present some specimens of it at different periods:—

‘ Ergo xvi. Kalendæ Marsii, cum Lodhuvicus et Karolus in civitate, quæ olim Argentaria vocabatur, nunc autem Strazburg vulgo dicitur, et sacramenta quæ subter notata sunt Lodhuvicus Romana, Karolus verò teudisca lingua juraverunt, ac sic autè sacramenta circumfusam plebem, alter Teudisca, alter Romana lingua alloquuti sunt.’—(A. D. 842.)—*Nithardus.*

We give, first, the translation of the oath here alluded to, in the Latin of the age, to show better the different shades of deterioration through the different epochs.

Translation in Latin of the 6th and 7th centuries.

‘ Pro Dei amore, et pro Christiano poplo et nostro communis salvamento, de ista die in *abante*, in quantum Deus sapere et potere mi donat si salvare ego eccistum meum fratrem Karlun,’ &c.

Original, 9th century.

‘ Pro Deo amur, et pro Christiano poplo et nostro communis salvamento; dist di in avant, in quant Deus savir et podir me dunat, si salvara jeo cist meon fradre Karlo,’ &c.

Translation in Roman of the 12th century.

‘ Por Dex amor, et por Christian poplo et nostre communis salvamento, de cest jour in avant en kant Deus saveir et pooir me done, si salverai jeo cist meon frere Karle,’ &c.—*Bonamy*—(*Mem. Acad. Inscrif.* tome xxvi. p. 640.)

We regret we have not room to show, in detail, the *gradual change* from Latin into French, any further than by giving the translation in modern French:—

‘ Pour l’amer de Dieu et pour le peuple Chrétien, et notre commun salut, de ce jour en avant (à compter de ce jour), autant que Dieu m’en donne le savoir et le pouvoir, je défendrai mon frère Charles,’ &c.

We subjoin a specimen of Troubadour poetry, which may be easily deciphered by the aid of the Latin:—

Extract from a Complaint on the death of Richard Cœur de Lion, by the Troubadour Gaucelm Faidit. (1199.)

‘ Mortz es lo reys, e son passat mil an
Qu’ anc tan pros hom no fo; ni no vi res,
Ni ja non fo mais hom del sieu semblan,
Tan larc, tan pros, tan arditz, tal donaire;
Qu’ Alixandres, lo reys que venquet Daire,
No cre que tan dones ni tan messes;
Ni anc Charles ni Artus tan valgues;
Qu’ a tot lo mon se fes, qui n’ vol ver dir,
Als us doptar et als autres grazir.’

where many would see only words. The middle ages, although from them we date our political institutions, are those of which we are most ignorant. It is in the original poetry of the Troubadours and Trouveres that we may find more certainly, than in many chronicles and legends, the real history and manners of the times.

Since the pupil is not usually allowed as much time for the study of French as for that of Latin and Greek, the master may divide his pupils into two classes. The lower of these may study the elements in the following manner :—

The master should cause the pupils to repeat the French alphabet after him aloud. When all the class has mastered the alphabet sounds, he should take pains to make them pronounce properly the *e*, *é*, *è*, and *ê*. He should show them that the *e* mute is a small part of the sound of the *u*; that in the monosyllables *les*, *mes*, *des*, *ces*, &c., it is followed by *s*, and is sounded as *é* long. He may then write the number 1 over the *e* mute. It must then be shown that the *é fermé*, with a sharp accent, is so called because it is pronounced with the mouth nearly shut, and is sounded in a clear and rather sharp manner, either long or short, according to circumstances. The importance of this accent, by which active and passive words are often distinguished, should be dwelt upon, since, by mistaking it, both the sense of a phrase is altered and the harmony destroyed. General rules should be given as to the manner of placing it. As, for example, it should be observed, that Latin nouns ending in *tus* take the termination *té* in French, as *veritas*, *vérité*, &c. Similar remarks should be made on the *è*, which is pronounced with the mouth open, and is to be found in the penultimate of most words which, in Latin, end in *er*, which words very often end in *ère* in French, as *pater*, *père*; *mater*, *mère*, &c. This accent, it might be further remarked, is not destroyed by the final *nt* in verbs, or by the *ment* in adverbs, as in *aimèreit*, *amèrement*.

The right pronunciation of this sound is most important, as, above all others, it contributes to the harmony of the language. It is the other extreme to the *e* mute, which occurs continually, and is very different from the *é fermé*. Most persons pronounce French ill, because they put the acute accent on every *e* which occurs. The *é* long should be carefully observed, as it marks the suppression of some letter, and makes the syllable long, conformably to the analogy of the Latin language. Thus, *mesme* becomes *même*. The same remark applies to *â* and *î*, as in *âme* and *dîmes*. This *é* is not pronounced in quite so sonorous a manner as the *ê* grave. All words ending in *et* (excepting *et*, *and*) have

the sound of *é*. The same remark applies to the sounds of *ais*, *es*, and *ets*. We shall make no apology for these remarks on the accents, because we consider it of the utmost importance for learning to speak the French language, that they should be *completely* understood at the commencement; and because we consider, also, the power of *speaking* the French language as the object which the pupil should never lose sight of.

When these sounds are well understood, some book should be chosen to which is attached a translation in plain idiomatic English. There is at present no book which we can recommend as altogether suitable for this purpose, but still we may find some that will answer pretty well. The Dialogues of Madame de Genlis may serve, if the teacher will take care to correct those parts in which the English is not exact. When three or four of the easier dialogues are completely mastered, so that the pupil can read the French into English, and the English into French, with equal ease, we think he may go on to read some simple story, the master at the commencement aiding him as much as necessary, and by his remarks *introducing* the pupil to grammatical knowledge. As for a *grammar*, we only want it for reference. But whatever book be used, the master should read some sentences from it aloud, which should afterwards be read by the pupil in the same manner. When the pupil can pronounce a sentence well, the master should pass on to another—applying to each syllable the principles of pronunciation alluded to above. He should then give him a small portion to translate into English. Some elementary books of merit have vocabularies at the bottom of the page, which we think would be better at the end of the book, and we could wish that they were not constructed in the usual careless and incorrect mode of our ordinary dictionaries; each word should be given with all the inflexions which occur in the work, and the idioms at full length, with a double translation,—one literal, the other in the true English idiom. The vocabulary should also mark the person and tense of each verb which occurs, and should give all the grammatical explanations necessary. The Greek and Latin etymologies should be given by the master, when they are sufficiently clear for the pupil to follow them; otherwise they should be left for the second class.

The next step should be, to translate into French the English translation without the aid of the book. This should be done in a separate exercise book, leaving a margin on which the student should write the grammatical analysis of the principal words. In correcting this exercise, the master, instead

of setting the pupils right at once, should mark the faults, and give a grammatical precept by which they are to be corrected; and this precept he should continually urge them to put to the test, and to verify by what occurs in their reading. At a second lesson, the pupils should again read the original French, and translate it, *vivâ voce*, into English; and then they will feel themselves able to take their own English translation and read *that* into French, which will complete the exercise. This should be repeated in the same lesson until both exercises are made with equal facility. The original French should then be written down from the *dictation* of the master, as a step to French composition, and the understanding of the spoken language. A few lessons thus acquired will make the student feel that he has made progress, and he will be encouraged to proceed with confidence and pleasure. Again we affirm that little is done, unless the practice of writing the language, by retranslating every English translation into French, go step by step with the study of the original. It is unnecessary to say that the first lessons should be small in quantity. They may be increased as the student becomes more accustomed to the task. The master should give historical and geographical explanations, wherever they are necessary, with as much brevity as is consistent with perspicuity.

When Chambaud's and Descarrières' dictionary, edited by Boniface, cannot be obtained, the next that we should recommend is that of Lévizac, with the treatise on the verbs by Lequien, and the dictionary of verbs of M. Tarver, second edition. The works are not by any means free from defects, but they are really useful. In the last six months of the first year the pupils should learn by heart, with all possible correctness of pronunciation and accentuation, some of the more easy of La Fontaine's Fables, the master rendering into simple prose all those passages which contain the most difficult Gallicisms. A French edition should be chosen, the English ones being full of faults. La Fontaine is recommended because, above all other writers, with the exception of Madame de Sévigné, he abounds most with those real Gallicisms which occur continually in conversation and reading. There is not at present any edition of the French classics which is entirely suitable to young persons, in the choice of passages and notes.

We now come to the second year of study. Of course the method of proceeding is nearly the same as in the former year, with those developments which the students can now enter upon with profit. The history of France, both political and literary, should be studied with attention.

As there is no good literary history for the use of students, and as the work of La Harpe is both inaccurate and voluminous, besides being ill arranged and very partial, the master may take notes, for the first part of his course, from the excellent 'Histoire Littéraire de la France,' by the Benedictines of St. Maur. He may give these lessons by dictation, and may add the geographical and other remarks which the subject requires. He should, at the same time, furnish marginal remarks on grammar and etymology, of a deeper nature than were given to the first class. He should show that ninety-nine words out of a hundred are formed from the Latin, marking, at the same time, some of the more striking changes that have taken place in particular classes of words.

As we believe that the Latin language is not made much use of in facilitating the acquisition of the French, we shall just give a few examples of a classification which teachers may pursue further. We may remark also that the French nouns in general follow the genders of the Latin,—the neuter and masculine of the Latin corresponding to the French masculine, with very few exceptions, and the Latin feminine similarly corresponding to the French feminine. The following classes may all be extended very much further:—*Locus, lieu ; focus, feu ; locus, jeu ; impunitas, impunité ; veritus, vérité ; vanitas, vanité ; horror, horreur ; honor, honneur ; caput, chef ; caballus, cheval ; jungere, joindre ; pingere, peindre ; videre, voir ; assidere, asseoir, &c.* It is unnecessary to give any more examples at present. The pupil, by pursuing this classification, will learn the French with more ease, and, at the same time, will commence on a rational principle the study of the comparison of languages.

In giving the fables of La Fontaine, the analogous ones of Æsop and Phædrus should be cited. Once a week Boileau should be the subject of translation, with references to the passages imitated from the classics. We think it would be very useful for students also to make translations from Latin into French, from such a book as Cæsar, the master taking care to show the striking points of resemblance and difference between the words and idioms of the two languages: the master might also at the same time explain, in connexion with this part of the subject, the political changes which the geography of Gaul has undergone up to the present time. In examining the changes which time has produced in the names of places in France, the teacher will find excellent opportunities of showing a number of curious analogies, such as we have just hinted at in the preceding paragraph.

The pupil should not attempt original French composition

until he can translate, with fluency, into French, either from Latin or English, and then only in the form of remarks upon his daily lessons. Both master and pupil should now speak nothing but French. As a recreation, the biography of the most celebrated French writers should be related, intermixed with amusing anecdotes, and in the form of conversations. In writing the above sketch we have been prevented by our limits from going into that detail which the subject would bear. We hope, nevertheless, that enough has been said to show what might be done, in comparison with what really is done. *Two years* of study, commencing at the age of ten or twelve, according to circumstances, arranged in this manner, would better answer the purpose than the four or five which are often spent in conjugating the verbs *avoir* and *être*, with occasional digressions upon the genders of nouns and the irregular verbs, which leave the pupil with a knowledge of the language of the same quality as that possessed by the leaves of his dictionary, only not quite so accurate.

In conclusion, the writer of this article hopes that, as the above remarks are founded on experience, they may be entitled to some attention. He is aware that it is impossible to lay down absolute rules for teaching any subject: those which he has briefly described are such as he has found useful, and it is for this reason that he submits them to the judgment and criticism of others.

STATE OF EDUCATION IN TUSCANY IN THE YEAR 1830.

THE country whose intellectual condition and resources we propose to describe is of small extent, not exceeding in length, from north to south, one hundred and sixty miles, and in average breadth scarcely reaching sixty *. But with the exception of the unwholesome *maremme*, or marsh lands, overflowed by the sea, it swarms with population; the whole amounting to one million three hundred thousand. Every step we tread calls to mind illustrious actions and immortal men; nor are there wanting, even at this day, a few choice spirits worthy at least to keep alive the fire on the altars which a grateful country has erected to the memory of their great predecessors.

There was never a more favourable moment than the present for observing the moral condition of this country. Tuscany never appeared to advantage in time of war, for, with

* The area of Tuscany, including Elba, is generally stated at about 8500 sq. miles.

the exception of that portion of the population which derives its name from the city of Arezzo, whose emblem is a wild horse escaped from the hand which attempted to lead it, the Tuscans are, perhaps, the most pacific people on the face of the earth. Now, however, that the sweeping storm of French revolutionary fury has long ceased, and the tumbling billows which it raised are laid to rest, the rich treasures of the Tuscan mind, the gems of its genius, and its clear depths of thought, are fully discerned, which, in the troubled waters, escaped the most accurate observer*.

I. The Tuscan Church, and Education of Ecclesiastics.

In order to understand the moral condition of any Catholic country, it is indispensable, in the first place, to have correct ideas of the description and numbers of its ecclesiastical body. The Tuscan government, like every other absolute monarchy, takes good care not to make known to its subjects their own economical condition, as this might be supposed to imply in the people a right to discuss and to regulate it. There is, therefore, nothing left for us but to form our estimates of the unknown from the little that is known.

The population, amounting to about one million three hundred thousand, and the beneficed clergy and curates serving parishes being found in the country to be in a somewhat less ratio than one to 500 souls, and in the cities somewhat exceeding this, we may take the medium, which will give us an amount of 2600. The secular clergy, and the *religious* or regular clergy, who have no stated ecclesiastical employment, are always found somewhat to exceed in numbers those who have. So that, allowing 800 for the excess of the latter above the former, which is a low computation, we shall have, *for the whole ecclesiastical body of the Tuscan dominions, the gross amount of 6000.*

It is one of the functions of this body to take part in the national education, and the greater part of them are actually so occupied ; hence it will be seen how vast a sphere of influence over the public mind is open to them. In the Universities, the Colleges, the Seminaries, who is it that ascends the Professor's chair to become the source of illumination, as far as it is to be diffused, among the middle classes of the community ?—The Ecclesiastic. In the splendid palace of the noble, who is to communicate ideas worthy of his high station, to the hope of an illustrious house ?—The Eccle-

* Written in May, 1830. The revolutionary spirit, which has since shown itself in Italy, has affected Tuscany far less than any other portion of that country.—April, 1831.

siastic. And in the remote country commune, who puts the spectacles on his nose, and takes the dreaded sceptre in hand, to teach the A B C to the ploughboy, and the *hoc genus, haec musa*, to him who may aspire himself to become a public instructor?—The Ecclesiastic.

To such an extreme is this system carried, that even the instructress of the young ladies in the *Conservatorio*, whose office it is to superintend their progress in the noble arts of spelling and embroidery, must be an *oblata*, an offering, one who has taken the veil, a species of priestess.

Before, therefore, we attempt to determine any further questions, let us see how the *educators* are *educated*—how far the fountains of public instruction are themselves pure, and whether they are likely to send forth sweet waters or bitter. Instead of trusting to circumstances or the future inclination of their offspring to direct them in their way of life, as in England, a child is hardly born to Italian parents before they begin to think to what art or profession they shall destine him. And if holy orders be the object of parental preference, the most anxious care is taken that, in that tender age, in which he can have neither affirmative nor negative voice in the business, his childish spirit should be bent towards the employment of those acts and the repetition of those forms which the Church enjoins. The little trembling lips murmur with frequent prayers, the sign of the cross is duly made on the infant breast, the rosary is handled betimes, the tender fingers are dipped in holy water, and the child soon goes by the name of *abbatino*, and learns to regard himself as a sort of sacred person devoted to the service of the Deity. At seven he goes to the public school, and between ten and twelve he is immured within the gloomy walls of the Seminary for Priests, and now (if not before, as, through the zeal of parents, is sometimes the case) he assumes the priestly garments, which, while they remind him of the decorum necessary to be observed in his manners, fix unalterably in his mind the feelings of the *caste*.

Here it will be naturally inquired whether it is probable, from circumstances, that the parents are influenced in general by worthy motives in the choice of a profession for their son? We think that the probability is in favour of their being so, since they must disregard the calls of *immediate* interest, which is, in general, most clamorous for indulgence, in order to attend to that which is more *remote*. The child could be more profitably employed, by a needy parent, in learning some mechanical art; for it is a very remarkable fact, and of great importance in forming an estimate of the moral condition of the Tuscan people, that whereas, in most

other countries, the learner must pay the master for his instructions in any art he may wish to acquire, in Tuscany the master is obliged to remunerate the services of the learner. This is a part of the wise policy of the Tuscan government, by which the useful *arts* are encouraged and a greater degree of respectability is secured to the *ecclesiastical* body. The three pauls a week which a father can receive for the labours of each of his sons placed with a carpenter or other mechanic, form a salutary counterbalance to the remote prospect of that greater ease, respectability, and comfort which will hereafter be enjoyed by the churchman. A still further check is imposed by the circumstance that the parents must expend a considerable sum on a son who is destined for holy orders. By them must be defrayed the expense of his priests' garments, about seven crowns a year—a much larger sum than would be necessary for one who was learning any useful art. By them also must, in general, be paid the sum of at least thirty-six crowns per annum, which, under the title of *retta*, is demanded for the board of each pupil at the Seminary of Priests. At the seminaries at Pisa and Florence fifty-six crowns per annum are paid at present.

On the other hand, the remote advantages of bringing up a son to the Church are very considerable. Devoted to celibacy, and having necessarily few wants from the simplicity of living which decorum requires, it is natural that, if well disposed, he should contribute to the maintenance of his parents in old age, and to the advancement in life of the children of his brothers and sisters; and, should there be no hope of his ever rising higher than to be one of the numerous Canons of the twenty-one Cathedrals of Tuscany, the *seven hundred crowns per annum* he would enjoy without labour in this situation hold out a sufficient inducement. In order to be entitled to holy orders, it is necessary that the individual should declare himself to be worth thirty crowns per annum, so that the absolutely indigent are excluded. A nomination to a benefice to that amount is allowed to be equivalent to property. Benefices of this low amount are very commonly held by young Corsican clergy, who have been very indifferently educated in their own country, but from their hardy mountain constitutions and habits can live on the smallest pittance. There are supposed to be 300 of this humble class in Tuscany, who appear to correspond to our Westmoreland curates.

Before we proceed any further, it may be proper, once for all, to enter into some explanation of the value of the Tuscan coins, and, what is of more importance to be borne in mind, the relative value which Tuscan ideas and modes of living

attach to certain sums of money as compared with the ideas and modes of living of the English. The value of a paul is sixpence, although, from the rate of exchange having for many years past been in favour of England, a sixpence is worth a fraction more than a paul ; 40 of the former, or 1*l.* sterling, being equal to about 43 or 45 of the latter. The *scudo*, or crown, contains ten pauls, and may therefore be reckoned at five shillings. Such is the actual value of the pieces of money of which we shall in this narrative have occasion to speak. But even an Englishman travelling in Tuscany, with all the mistakes into which his ignorance will lead him, and all the imposition to which it will lay him open, will find, if he is possessed of the average degree of prudence, that a paul, or sixpence, will be worth to him as much as a shilling would in England. And when we take further into account the bargains which a native will be enabled to make in dealing with his countrymen, (and how great a difference this will make in a year's expenses cannot be conceived by those who do not intimately know the Italian character,) and the low scale at which the ideas of expense and modes of living are fixed, compared with the English, a paul may be said to be equal to two shillings, or four times its nominal value. So that when we have said, above, that the Tuscan parent can obtain three pauls per week for the labour of each of his boys, it is the same thing as if we had said of an English parent that he could obtain six shillings. In the same way, when he pays 36 crowns for the board of his son, he may be considered as paying 36*l.* ; and the canonicate to which that son may aspire may be regarded as bringing him in 700*l.* sterling per annum. We should, however, exclude from the comparison those parts of England in which, from the great abundance of fish or poultry, the means of sustenance are *remarkably* cheap, such as Cornwall, and, until of late years, Devonshire ; and we would compare Leghorn with Bristol ; Pisa, the seat of the principal Tuscan University, with Oxford ; Siena with Chester or Norwich, Florence with London, and the provincial parts of Tuscany in general with the inland counties of England. For example, eight lofty and good-sized apartments, with kitchen, may be obtained, *by an Italian*, in Florence, at 50 crowns per annum, *i. e.* 12*l.* 10*s.* sterling.

At seven years of age it is time that our young Ecclesiastic should go to the public school, where, at the expense of the commune or of a pious foundation, the future priest is instructed by one who already bears that sacred character. Here he learns reading, writing, arithmetic, and the rudi-

ments of Latin. The grammar employed in teaching the latter language is that well known throughout Italy as the *Padua Grammar*, into which none of the modern improvements of German and English grammarians have found their way. For construing, extracts from the historical parts of the Vulgate translation of the Bible are employed, in conjunction with some easy Latin author. These ancient institutions, with the exception of the six sectional schools for each of the divisions of Florence, may be described as being in a very neglected state, and the five years spent here as pretty nearly lost. The expression of a parent in speaking on this subject to the writer, savoured of Italian hyperbole, but was, in some degree, *founded on fact*,—‘ My son knew *a little* before I sent him to school, but, when he came back, he knew *nothing*.’

His next step is to the Seminary for Priests. There are twenty-one dioceses in Tuscany, and each is provided with its seminary, besides similar institutions, under the name of colleges, for the education of the priests destined for the special service of the immense cathedrals of Florence, Pisa, and Siena, whose numerous altars and unusually splendid ritual require the ministrations of a large body of servants. Here he continues his Latin studies, and learns as much Greek (through the medium of the old Padua Grammar again) as is necessary to construe the Greek Testament and some of the Greek Fathers. He also studies logic, rhetoric, mathematics, natural philosophy, although but sparingly, and reads some portions of the vast and instructive page of history, ecclesiastical and profane. The former of these in particular, ecclesiastical history, is considered as a dangerous branch of knowledge, and only to be pursued at the seminary under the strictest regulations, as being calculated to call into doubt principles and facts the belief of which is essential to the Catholic religion. Metaphysics are likewise taught with a special view to their bearing upon dogmatic theology. Here the *general* education of a priest ends, for the remainder of eight or ten years passed in the seminary is devoted to theological studies, and he very rarely goes to a university. It will be seen, therefore, that his education is, generally speaking, extremely limited. In some of the country seminaries Greek is not taught at all, and in none of them is it conceived to be desirable that a priest should be an elegant scholar or a profound man of science. One branch of science, natural history, in its most extended sense, is entirely omitted; although there is no subject of human knowledge better calculated to enlarge the

mind and agreeably to occupy the thoughts of an ecclesiastic, and to furnish him with a store of pleasing illustrations for his discourses. The study of the Hebrew language is likewise but rarely attended to, and that of the other Eastern and of all modern languages is generally neglected. In order to hold the office of a Bishop, or that of the Vicar of a Bishop, it is necessary to have taken the diplomas of civil and canon law at a University, but the great bulk of the clergy never enter the walls of a University.

Each seminary is under the immediate control of the Bishop of the diocese, who nominates the Rector and the masters from amongst his own clergy. The moral conduct of the inmates is subject to the most vigilant inspection, and they are obliged to observe with great rigour all the laws and regulations of the Church. They fast most strictly during Lent and on the other appointed days, which amount in the whole year to about 65 out of the 365. They take part in the services of the neighbouring cathedral, besides the long morning and evening prayers of their own private chapel. Their intercourse with even their *relatives* without, is exactly regulated; so that the hours passed within the lofty walls of the seminary are very commonly remembered as those of weariness and sorrow, and the youth pants for the time when the imposition of holy hands shall make him again an inhabitant of the world and a partaker of its enjoyments. Ten years being at length terminated, and our student having attained his twenty-fourth year, and received ordination, he is now ready himself to mount the professor's chair—with what qualifications for it (as regards the great body of ecclesiastics) the reader may now judge.

Before we conclude this head, we will give a list of the professorships in the Seminary of San Giorgio, at Siena, as a specimen. 1. Dogmatic Theology. 2. Moral Theology. 3. Mathematics. 4. Civil and Canon Law. 5. An *Honorary Reader* in Greek and Italian literature, who, by way of mere appendage to his office, is also 'Professor of Metaphysics, Ethics, and Natural Philosophy.' Here (as well as in the other seminaries in large towns) *lay* students are also admitted. There are at present 35 divinity students, and about 80 lay students. Elementary instruction is given by masters attending from the town.

Such is the education of the *secular* clergy (for of them alone we have hitherto spoken); and it must be declared to their honour that, in so far as they have attained to any distinction as scholars, philosophers, or men of general know-

ledge, they have been indebted to their own desire of improvement and successful pursuit of it, rather than to the provisions made by the Church and State for their education. To the honour of the Tuscan priests, then, be it recorded, that in successive ages since the revival of learning there have never been wanting a few, a very few, of this body who have been eminent in the various walks of science and learning, who have successfully cultivated the Muses, and who have written their own sonorous and beautiful language, and its kindred and more ancient tongue, in all their purity and force.

As these brief hints relate to the year 1830, it only falls within our province to speak of the living. 1. The *Canonico Borghi*, Librarian at the Riccardian Library at Florence, is the elegant and learned translator of the Odes of Pindar into Italian verse. 2. The *Abate Zannoni*; curator of the antiquities in the Gallery de' Medici, is principally known to the public by his accounts of the excavations and discoveries successively made at Volterra; but he has also passed the office of President of the Academy of La Crusca, and has published a comedy written in the present dialect of the country people of Camaldoli. 3. The *Canonico Moreni* is celebrated for his works on the history and biography of his native country. 4. The *Canonico Boni* is distinguished by his knowledge of Greek literature. 5. The *Abate Follini*, Librarian of the Magliabechian Library, is a man of profound learning. 6. The *Canonico Pacchiani*, Professor Emeritus of Natural Philosophy in the University of Pisa, is a man of great critical acumen and profound research respecting the origin and history of the Italian language, as well as eminent in the branch of science over which he lately presided. 7. The *Canonico de Angelis*, Professor of Dogmatic Theology at Siena, is author of a learned history of his own University, and other valuable works. 8. The *Abate Pedani*, editor of the Florence Gazette, although but little known, has published some beautiful elegiac odes, and is a most exact and astonishingly fluent speaker of the Latin language. 9. The *Abate Fioravanti* has published nothing, but is probably better known than many who have written extensive works. He is an ardent admirer and student of the great Italian poets, particularly Dante, which he reads with an enthusiasm which is inspiring to his hearers, and possesses so much taste, information, and urbanity of manners as to render his society sought after by every distinguished foreigner who visits Florence. 10. The *Canonico Bagnoli*, Professor of Greek and Latin Literature at Pisa, is

the author of 'Il Cadmo,' an historico-philosophical poem, by which he procured himself great celebrity.

The Tuscan church is not a rich one, and the clergy are, as a body, neither indolent in their calling nor worldly-minded. The bishops (with one exception, we have been told) never meddle with the affairs of the state, and are in general mild in the exercise of their spiritual authority. Their emoluments are small, with the exception of Florence, which has a revenue of 12,000 crowns (3000*l.*) per annum, and, including the use of palaces, &c., is estimated at 18,000 crowns. It ought to be observed also, with reference to what has been said before respecting the relative value of money in England and Tuscany, that in a rank of life where *foreign* luxuries are expected to form a part of daily consumption, a crown cannot be considered to be worth anything like a pound sterling. French wines, for instance, and the finest broad cloth, are at about the same price as in England. The other sees are worth about 3000 or 4000 crowns per annum; and two or three of them only, about 800 or 1000. But translations are very rare.

The sees are as follows, including Lucca and Massa, which are ecclesiastically connected with Tuscany, and usually reckoned, therefore, as Tuscan bishoprics. 1. FLORENCE (archp.), having for suffragans, Colle, Fiesole, Pistoja and Prato, San Miniato, San Sepolcro. 2. PISA (archp.), Leghorn, Pontremoli. 3. SIENA (archp.), Chiusi, Grosseto, Massa, Sovana. 4. LUCCA (archp.), not suffragan, Arezzo, Cortona, Montalcino, Monte Pulciano, Pescia, and Volterra.

In order to understand how the *educators* of the Tuscan youth are themselves educated, it is necessary to say something respecting the MONASTIC ORDERS.

The *Certosini* or *Chartreuse* friars appear to lead very happy lives in the delicious retreats to which they have banished themselves, where they are surrounded by all the elegances of the fine arts and the comforts of life.

The Franciscan friars are in general a corpulent, easy tempered, and insignificant set of men, very well content to find themselves tolerated by a world which once revered them, and have no pretensions to influence the state of education. The Capuchins send out eminent preachers educated amongst themselves; but the *Scuoloppii*, as they are vulgarly called in Italy, from a contraction of the words *scuole pie*, or the brethren of the pious schools, are amongst the chief educators of the rising generation. This order took its rise in Spain in the fourteenth century, and has been distinguished, ever since its foundation, for the high respectability,

cultivation, and intelligence of its members. To the three ordinary vows of poverty, chastity, and obedience to their own superiors and their General at Rome, this order adds that of gratuitous employment in education; so that a friar of this order is necessarily a professor, none being admitted who will not or cannot occupy themselves constantly in some branch or other of education. For this reason they do not congregate in large numbers, but in every city or principal town of Tuscany there is a little knot of these laborious and self-denying men, diffusing the greatest of earthly blessings around them for no earthly reward; for, to their honour be it spoken, the law of their community, which forbids them to receive any remuneration for their instructions, is not only never *transgressed*, but never (what it was more likely to be) *evaded*. A few pounds of chocolate at each of the vacations, or some such harmless present, is said to be the only return they receive for superintending, for many a weary year, the education of those, many of whom are perfectly able amply to repay their labours. Their schools, which, from the kind of instruction given in them, might rather be called colleges, are less numerously attended than they merit, from a prejudice against their severe modes of discipline, and the frequency of corporal punishment. In so far as the complaint is well-founded, as it probably is in some degree, this circumstance may be attributed to their being condemned to celibacy, and consequently having no proper sympathy with children,—an evil which the secular clergy are more likely to avoid, from their greater intercourse with the world. The writer of this article is, however, acquainted with a remarkable instance of the reverse of this treatment in the *Padre Pendola*, at Siena, who gratuitously instructs the children of the Deaf and Dumb Institution there, with a truly paternal suavity of manner and patience of instruction. The peculiar excellence of their mode of teaching is, that instead of adhering with pertinacity to the beaten track of their predecessors, as the priests commonly do, they have their ears and eyes perpetually open to every kind of improvement in education, and study new systems of metaphysics, morals, &c., with a view of making their pupils acquainted with them. It is true that they endeavour to give them a strong bias in favour of whatever is established and has been long in repute; and if anything new is presented to their hearers, it is with a view of directing the whole strength of their powerful minds to the confutation of it. In this they will sometimes be successful, and at others not. But, at all events, the opportunity of judging is fairly afforded. The

pious schools at Florence and Siena are in the greatest repute, owing principally to the distinguished talents of the *Padre Ricca*, in natural philosophy and natural history, at the latter place, and the still greater fame of the *Padre Inghirami*, who is director of the observatory, and may be called the *astronomer royal*, at the former, both of whom have published several works connected with their respective branches of science. The professors of these two celebrated establishments proceed from the humblest elementary teaching to the highest branches of knowledge. The writer has attended their lectures on natural philosophy, in Florence, with the greatest pleasure and improvement. The manner of the professor was not only remarkably clear, but so animated as necessarily to secure the attention of his hearers. Towards the close of the course, the professor announced his readiness to receive voluntary contributions towards defraying the expense of machinery and experiments, incurred by the convent, which, as it included a beautiful model of a steam-engine, must in that year have been considerable.

During the French revolution and government all the monasteries in Tuscany were suppressed, except the *Scuole Pie*. Since the restoration, the Grand Duke has allowed to the surviving monks the sum of thirty crowns per annum, as a pension, in lieu of their former conventional demesnes, and this even if they become secular priests and obtain lucrative employments. But he favours their uniting themselves again into convents, by allowing them in that case an equivalent in land, which is more serviceable to them, *as a body*, than the same amount in cash; as they can live comfortably together on the produce of the land, and lay by for the future wants of the convent out of the profits of their industry.

Among the other orders, the *Padre Battini*, a Servite (which order was established in Florence A.D. 1233), has distinguished himself by an able work on the manners of the middle ages. *Ciampi*, a Tuscan, who was sent for by the University of Wilna to take the professorship of the Greek language, in which, and other branches of learning, he is deeply skilled, was also once a monk. He is now Professor Emeritus.

II. *Education of the Nobility.*

There are in Tuscany two species of nobility; the first is that which is derived from birth or creation, the second is that which arises from the exercise of an employment or pro-

fession which is held to be noble. In this latter sense, however improper we may deem the application of the term, the heads of each department of the servants of the crown, *e. g.* the collector and comptroller of the customs, the receiver-general of the tobacco duties, the director of the department of bridges and roads, the head librarians and the keepers of the museums, the professors of the universities, the advocates, all the clergy who have received full ordination, and all persons decorated with a cross, are noblemen. Although, therefore, the circle of nobility is exclusive in Tuscany, as well as in other countries, it is easy to perceive that by the help of so generous an interpretation of what constitutes a nobleman, the class is a widely extended one, and may be presumed to include the great bulk of the well-informed and cultivated part of the community. For the sake of greater distinctness, however, we shall, under the present head, confine the application of the term to the high, as it is called in Italy, or the hereditary nobility. The education of this class previously to the French Revolution was of the worst possible kind, and it still continues to be wretchedly bad in those cases in which the old plan of *domestic* education is persevered in; Italian parents, and especially noble parents, being much too indulgent to afford the hope that they should ever *allow* their children to be properly disciplined and instructed under their own roof. The system, now nearly shamed out of existence, is this:—The 'illustrious' parents choose a good-humoured young priestling, who may perhaps possess better qualifications, but is selected because an empty purse makes him readily subservient to the will of those who can supply his necessities. The poor man soon finds that he is well or ill treated by the family in exact proportion to the greater or less degree of indulgence he shows to his lordling pupil. 'Al signorino duole un po' la testa; il signorino ha d'andare in carrozza con i genitori; non gli guasti il buon umore, poverino!' 'The young gentleman's head aches; the young gentleman must ride out with his parents; do not spoil his fine temper, poor fellow!' are excuses for the son's negligences, to which the preceptor dares offer no reply. The children of the family pass so very little of their time, in general, in the company of their parents, that the latter take care that they shall, at all hazards, be in good humour on such occasions; and however anxious a tutor may be conscientiously to acquit himself of his charge, he finds his good intentions defeated by a power which he cannot combat. The young lord grows up wayward and ignorant; and if he ever afterwards distinguishes himself by his

acquirements, it is in spite, and not in consequence, of his early education. In a posthumous volume of the Satires of Alfieri*, published in 1804, this absurd and injurious system fell under so powerful a lash, that it is surprising it should have survived its castigation.

There is still to be seen occasionally in the neighbourhood of Florence the poor little spiritless *contino*, not more than five years of age, and far from corresponding to the description of paternal partiality, *pien d' ingegno*, not led, but driven forward by a tall, gloomy, clumsy *pretone*, Don Raglia da Bastiero himself, poring over a book, and apparently destitute of even a spark of sympathy for his little charge.

Allowance must of course be made for the exaggeration of a satirist; but it is surprising that, under a system of domestic education which could afford any foundation for such a picture as the one alluded to, noblemen should have been found to distinguish themselves either by their attainments at the university or by their actions in life. Happily, a very different system is now nearly universally adopted. The principal part of the education of the Tuscan nobility is now generally conducted at the *Collegi de' Nobili*, the most celebrated of which is that at Siena, called Collegio Tolemei, from the noble family who endowed it, where the pupils enjoy the benefit of the able instruction of the monks of the Scuole Pie, adjoining to whose convent the college premises are for this purpose erected. That they should accept the gratuitous services of these excellent monks will not appear surprising, when it is considered that the lectures at the universities, although paid for by the state, are gratuitous to the public; and that in a country where gardens, museums, galleries, exhibitions, libraries, all the stores of learning and the arts in short, are as freely open to all as the light and air of heaven, the duty of paying, and the shame of not paying, cannot be expected to be so firmly rooted in the minds of the natives as they are in those of our own countrymen. And it would be a strange perversity which would insist on having the worst, and paying for it, when the best is to be had for nothing. A few of the Tuscan nobility, after finishing their studies at their own colleges, go to one of the national universities; but a Tuscan noble going abroad for education would be a phenomenon. On the whole, their education may be considered as being still inferior to that of the same class in the other continental nations. Yet, as

there are not more than about a dozen of them who are possessed of extensive wealth, they find sufficient inducement to employ their subsequent leisure in the pursuits of science and literature. And there is no country in the world where *life itself is education* in so great a degree as in Tuscany. Let us suppose a noble Florentine, for example, to have been educated by a priest, formed on the model of the dark ages —a man of the tenth century revived. Even for one so brought up to the age of manhood, the monuments of antiquity around him would not forbear to tell their tale of the history of former times ; nor could the heart-stirring compositions of the finest geniuses, in the most beautiful language that exists, as nightly heard at the theatres, fail to inspire the sentiments of liberty and patriotism ; nor could he listen to any of their admirable improvvisatori, nor be present at their brilliant conversazioni, nor be exposed to the blaze of light which from a thousand other quarters would burst upon him, without learning something new and valuable every day and hour of his life.

(1.) Among the living nobility of Florence, the most distinguished for his classical acquirements, as well as for his poetic genius, is *G. B. Niccolini*, whose prose writings on subjects of taste and criticism are reckoned models of the language. But he is most known and admired as a poet and a patriot poet. His tragedy of *Antonio Foscarini* in particular, in which the sentiments of an unconquerable love of liberty, and of an exalted, unbending sense of public justice and honour, are poured forth with all the majesty and sweetness that the Tuscan tongue possesses, is listened to by his countrymen, night after night, with never-wearying applause. During the winter of 1829, when this tragedy was several times represented at Florence, the people went at twelve o'clock in the day to secure their places, patiently waiting until half-past seven for the commencement of the performance.

(2.) Although he is lately dead (and, therefore, does not strictly fall within the present plan), we cannot refrain from mentioning the *Count d' Elci*, to whom the capital is under immense obligations for the gift of a library estimated at the value of a hundred thousand pounds sterling, collected by himself, comprising a vast number of rare works in various languages ; amongst which are, what Tuscany was before deficient in, editiones principes of the Greek and Roman classics. D' Elci published in his lifetime a corrected text of *Lucan*, and a good many satires written in elegant Latin verse. This princely gift, for the reception of

which the Grand Duke has erected additional apartments to the celebrated Lorenzo-Medicean Library, forms the *fifth* of those noble institutions which are now open to the public. The charming library of the Accademia delle Belle Arti may indeed be said to make the number six, as permission is granted to any respectable person to read there.

(3.) Another precious bequest to Tuscany by one of her nobles was the foundation of an academy of mutual instruction in the arts, sciences, and languages, by the Count *Luigi Bardi*, who died a few months ago. The institution is not to be opened for five years. Count Bardi distinguished himself in early life by the publication of an elegant dissertation on the progress of the sciences in Tuscany, read before the Lyceum, an institution for the delivery of lectures and essays, founded by the Queen of Etruria, Maria Luisa, in the year 1807, and abolished by Ferdinand III. on his restoration in 1814.

(4.) The Count *Buldelli Boni*, governor of Siena, who is a native of Cortona in Tuscany, is a member of the Academy of La Crusca, under whose sanction he has published biographical and literary notices of the lives of Petrarch, Boccaccio, and Macchiavelli, and the Voyages of Discovery of Marco Polo in the thirteenth century, in two volumes quarto, with numerous geographical, scientific, and philological notes and dissertations*.

(5.) The Cavalier *Mancini* is a very agreeable poet, and has published an Italian translation of the Iliad, of the Georgics of Virgil, and last, but not the least difficult or successful of his undertakings, of Pope's Essay on Man.

(6.) The Marquis *Gino Capponi* possesses very considerable literary talents, and is one of the chief supports of the *Antologia*, a monthly journal of great merit, published by Vicusseux, and read throughout Europe. *Capponi's* articles commonly have his name affixed.

Amongst the young nobility of Tuscany, one of the favourite methods of promoting the interests of their country is studying the theory of agriculture, and occasionally, but too rarely, putting theory to the test of experience. Whether the celebrated Imperial and Royal Society of the *Georgofili*, which assumes a high literary character, as well as agricultural, has been of much real service to their country, is doubted by many. But the intention is laudable; and amongst these literary and philosophical agriculturists, their noble secretary, (7.) the Marquess *Cosimo Itidolfi*, is much

* He died April, 1831.

distinguished by his publications and experiments ; and it is proper to add, that his claims to notice as a literary man and a philanthropist do not rest solely on the merits of that society. He is the munificent patron of schools on the Lancasterian plan for instruction in the fine arts and in useful knowledge.

A great proportion of eminent statesmen and public officers in Tuscany have arisen from the lowest rank, as we shall hereafter have occasion to show in speaking of the education of the people. Several, however, are descended from the ancient nobility of the country. Amongst these are (8.) the *Prince Corsini*, the very able minister of state for the home department ; and (9.) *Count Fossombroni*, at present, and for many years past, prime minister of Tuscany, of whose talents and public virtues it would be difficult to say enough. He is now seventy-two years of age, and having held posts of distinction under successive governments, he has, for more than thirty years, been a blessing to his country. He is profoundly skilled in the exact sciences, yet possesses an equally ample knowledge of mankind. He enjoys so entirely the confidence of the present Grand Duke, that, although only the minister of an absolute monarch, he may be said to concentrate in himself the government of Tuscany. He has always shown himself the prompt and vigorous opponent of any attempted usurpation on the part of the court of Rome.

Fossombroni is well skilled in practical hydraulics ; and most of the plans for the draining of the marsh lands, and other similar improvements in the face of the country, have not only been generally projected, but actually planned and personally inspected by the prime minister. He is a zealous patron of merit in every rank of life ; and if any act of manifest injustice or oppression in this country is not repaired or punished, it is because Fossombroni's arm has been paralysed by the machinations of other persons *still nearer the imperial and royal ear than the premier*. Without having recourse to corruption to increase the very moderate emoluments of his office, it is said that, although simple in his mode of life, he will die poor.

III. *Education of Females.*

† Next to the education of the nobility, it seems proper to notice that of the young females of the higher ranks, as that of the lower ranks will come to be described under the head of the People. And here, were we to describe the state

of female education thirty years ago, we should have a woful tale to tell. Alfieri, in the satire on education before referred to, represents his ' Illustrious Count ' as consigning to the tutor of his five hopeful sons, merely by way of appendage to his duties, to explain to his daughter, who had not yet entered the convent, what least of all things in the world require explanation—*the airs to Metastasio's Dramas*; adding that the countess had no time to attend to her education, and he still less. Italian ladies of middle age describe the education of their youth as having been defective in the extreme. As the boys were immured in the college or seminary, so they were shut up in the convent for year after year, the progress of their education being as slow as that of time seemed to them to be. The Tuscan convents, previously to the French Revolution, were not only in a state of gross ignorance, but, in some instances, nurseries of vice. Although it cannot be doubted that in the worst times there were many of their inmates to whom the language of Spenser might apply,

Whose only joy was to relieve the needs
Of wretched soules and helpe the helplesse poore :
All night she spent in bidding of her bedes,
And all the day in doing good and godly deedes—

yet in general no system of education can be conceived more absurd and injurious than that which places those who are designed to constitute the charm of the social circle, under the training and instruction of recluses. This system is still persevered in : for Tuscany does not contain, as far as the writer is aware, a single establishment for the education of females of the higher class, which is not conventional. Public opinion has, however, so far prevailed, that the best masters in the branches of knowledge, useful or ornamental to the female sex, are now called in to aid the instruction of the nuns, and that without any regard to their being ecclesiastics or laymen ; so that the sarcasms of many travellers at the *general* ignorance of the Italian ladies, as regards Tuscany, may be said to be no longer applicable. No longer can it be said that, with the exception of a few score of pedants, the Italian ladies can do nothing but sing and tambour, and that there is no medium between a doctor of laws (to which distinction ladies are allowed to aspire) and one who cannot write her own name. Italy still possesses *many* ladies of genius and learning, and Tuscany *a few* ; but they no longer stand at the same immeasurable elevation above the rest of their sex. Allowance must be made by travellers for the mode in which the display of female talent is encou-

raged in Italy. It is very contrary to English taste to see very young ladies of rank act or recite at amateur theatres, or before very large audiences, invited for the express purpose of witnessing this display, at the houses of their parents. This feeling apart, the writer has been deeply interested at witnessing the recitation of the deep-toned tragedies of Alfieri, and the most sublime passages of Dante, with such a delicate discrimination, and with a taste and feeling so completely entering into the soul of the author, as to convey the conviction that the fair dilettanti, while they possessed minds cast in no ordinary mould, had been trained likewise by no ordinary routine of instruction. The *Florentine* ladies in particular, of the rising generation, are incomparable readers and reciters, a distinction which they owe to the instructions of Signor Morrocchesi, professor of declamation, and formerly an actor, who had the singular merit of rendering popular the once neglected performances of the great reviver (not to say the father) of Italian tragedy. As the following anecdote speaks highly in favour of the character of one, of whose feelings and disposition little that is favourable is recorded, it is worth relating. In 1800, Alfieri's tragedy of *Saul*, composed by him and performed on the Roman stage in 1783, had, in common with his other tragedies, experienced seventeen years of neglect. Although acted, they were little understood or admired, because there were no actors who could give effect to a degree of energy and variety wholly new to the Italian tragedy. The monotony of delivery, which is still by the multitude regarded as even a *rule* of Italian recitation in the serious style, was absolute murder to the bold conceptions of Alfieri. Unexpectedly, however, he was informed that his *Saul* was becoming popular at the Teatro Nuovo of Florence. Incredulous of the fact, he went, and found, to his inexpressible delight, Marrocchesi, before a crowded audience, the very *Saul* of his own imaginings. The actor, a man of genuine sensibility, was so overcome by the presence and plaudits of the author, that when he came to the end of the Fifth Act, where, exclaiming—

Empia Filiste,

Mi troverai, ma almen da re, qui . . . morto,—

he falls on his sword, he was very near inflicting on himself a more than dramatic death, and having severely wounded himself, was carried off the stage apparently dead. Alfieri darted behind the scenes, and having personally paid him every attention necessary for his restoration, was the first object which met the eyes of the recovered actor, affection-

ately pressing his hand in his. And from that moment to the end of the poet's life, the reviver of Italian tragedy was the warm and generous friend and patron of the reviver of the art of declamation in Tuscany.

This anecdote may serve to show that the ladies of Florence, by placing themselves under such an instructor, are not only acquiring an art by which they may afford a rational and pleasing amusement to their friends, but are in the way of having their taste and sensibilities cultivated, and their moral and intellectual elevation advanced. If the reader lament that public display should be made a principal object in female education, we agree with him in this sentiment; but it is our business to represent facts as they are, not as we would wish them. As there are no boarding-schools for young ladies in Tuscany, it becomes an interesting inquiry how far the '*educatrici*' attached to the convents, in point of extent and number of pupils, supply their place. The capital may serve as a specimen, where there are seven of these institutions. 1st. The *educatricio* of the convent of the *Annunciata*, under the special patronage of the Grand Duchess, where all the highest nobility are educated, contains about one hundred and twenty pupils, and the system of education pursued there, with the assistance of the ablest professors in Tuscany, is said to be, both in an intellectual and moral point of view, of the very best kind, and the conventional restrictions and religious requisitions to be liberally understood, although none, of course, can be admitted who do not conform to the Catholic ceremonies—a regulation which can hardly be felt as a grievance, as there is probably not a single properly Tuscan family belonging to any other communion than that of the church of Rome*. In the six remaining convents, (2.) *Ripoli*, (3.) *Gli Angiolini*, (4.) *S. Agata*, (5.) *Le Mantellate*, (6.) *Il Conventino*,—all within the city, and at a short distance from it, (7.) *Le Quietè*, the plan of instruction is similar; but smaller funds do not allow of equal advantages being enjoyed by the pupils. At the *Annunciata* board and a full course of instruction cost nearly four hundred crowns (100*l.* sterling) per annum to the parents. There are about seventy pupils. Several of the highest noble families in Tuscany have recently adopted the system of *domestic* instruction, with the assistance of

* Exceptions to this remark can hardly be said to be formed by the *Jews*, who are pretty numerously settled at Leghorn, or by the few *Protestant* families from the Swiss Canton of *Ticino* settled in Florence, and for whose benefit the Swiss pastor has lately begun to preach once in six weeks in the *Italian* language instead of *French*, which is in Italy the language of Protestantism.

the attendance of masters. Where the mothers of families are themselves well educated, as they are rapidly becoming, this plan may be attended with some advantages, although, as far as the observation of the writer has extended, bitter disappointment has been the result of the pleasing theory of an *exclusively* domestic education. Having described the nature of female education in Tuscany, our next inquiry is what are its results? The beneficial influence of woman on the society in which she lives, is infinitely more in proportion to her moral than to her intellectual superiority. He who has a heart to be a genuine admirer of this fine country with its interesting inhabitants, will shed proportionably bitter tears over its stains, and hail with delight every appearance of improvement.

The best-informed natives agree in affirming that infidelity to the sacred ties of the conjugal, and consequent neglect of the no less sacred duties of the parental, relation in either sex, is no longer a fashionable and uncensured crime. Public opinion is daily and hourly acquiring strength to brand it with merited disgrace, however highly its forehead may be raised. The reformation of public morals requires a purer and a more affectionate hand than that which raised the lash of a Juvenal or an Alfieri, and it is consolatory to know that Tuscany is *beginning*, although but beginning, to supply her great want—that of moral writers themselves above all stain or suspicion. In confirmation of this remark, several articles in the ‘Antologia’ of Florence, for the years 1828 and 1829, and the number for September, 1827, may be appealed to, the writers of which are known to the public; and several little tracts, which (without any society to direct them) are flying about the country, and arousing the attention, it is understood, of the hitherto lethargic or contemptuous *fashionable public*. Exquisitely beautiful in style is the little anonymous publication, well known to be the production of Professor *Mori*, of Siena, entitled, ‘A Letter of Advice from Philetus to Theodora, on the eve of her Marriage.’ Are we to consider the fact, that this valuable little publication appears not only anonymously, but without place or printer’s name, as an indication, that in the pure and lofty region of morals, as applied to human practice, the Tuscan muse makes her way with timid steps, and blushing to return to the right path? Has, then, the pulpit been silent? No; but it has thundered idly, because it has done nothing but thunder.

Tuscany boasts the names of several ladies of distinguished

talent now living. (1.)* The Signora *Rosselini*, of Florence, is an elegant writer of comedies. (2.) The Signora *Palli*, the daughter of a merchant at Leghorn, is an improvvisatrice of interesting tragedies, some of which have been published. (3.) *Marchionni* is admired all over Italy, for a very rare talent in an Italian, that of comic acting. (4.) *Internari* possesses astonishing powers as a tragic actress, and is said to be a woman of very superior intellectual endowments and acquirements. (5.) The Signora *Muzzei* is a lady of considerable learning, having been in early life an improvvisatrice in Greek.

As the talent of improvisation is nearly peculiar to the Italians, and in Tuscany is more frequently possessed by the fair sex than by men, it may be proper to introduce in this place a few observations respecting it. As exercised by the beggars in the great square of Florence, it is a mere jingle of rhymes, although certainly the interminable abundance and facility of their production is very wonderful. Those who exercise this talent among the cultivated classes, and who reason or attempt to reason upon it, describe it as being 'rather a gift of the tongue than of the understanding.' It is not very easy to affix precise ideas to this account of the matter. But although what is thus delivered has often all the advantage of premeditation, yet were the speaker to pause even a moment to consider what he should say, he would be infallibly lost. The machine is wound up: it must go on until it is down. Perhaps by pausing and giving way to the idea of difficulty in the undertaking, that courage and presence of mind would be lost which are the first essentials to success. The Signora *Mazzei* possesses the superior and incalculable advantage of a mind richly stored with the facts and images of real and fictitious history, ancient and modern, and she is enabled to entertain the parties whom she invites for this purpose, with such endless variety as to lead one of them to observe, 'it is much easier for you to execute the tasks imposed on you, than for us to find subjects for you.' The first time the writer heard this lady, each individual, in a company of twenty persons, was invited in turn to give her a subject, of whatever kind. The strangest, and apparently least poetical, were selected by many. One of these was, a husband awaked by the cries of his children, lamenting that he is married. The next task was, having fourteen

* The succession of numbers here and elsewhere employed is not intended as an *order of merit*, but, by catching the eye of the reader, to furnish him with a ready answer to the question which is so frequently asked, 'What distinguished persons are there now living in Tuscany?'

rhymes given, to complete the lines, and to do this five times successively, each time treating of a different subject, selected by the company. The next was, to describe the character of Filippo Strozzi, the 'Cato of Tuscany,' who, although one of the wealthiest men in Europe, refused to be called anything but Philip. The next was the captivity of Tasso ; then the persecution of Galileo ; then the fifth act of a supposed tragedy on the history of Galeazzo, Visconti of Milan. This surprising exhibition of talent continued for about three hours ; and although the whole was performed with as unvarying regularity and promptness as if the result of machinery, a powerful and highly cultivated presiding mind was shown throughout.

The cultivation of such a talent as this cannot be deemed a frivolous or useless occupation of the time of the Tuscan ladies. The pens of many whom we have no opportunity of naming are likewise busily employed in translating the works of Miss Edgeworth, Miss Hamilton, and other English writers, the *Conversations* of Mrs. Marcet on scientific subjects, &c. They have still, indeed, a great want, which it may require perhaps a century of their present improved condition to supply,—to have a *Hannah More*, a *Baillie*, a *Barbauld*, amongst themselves ; and the first step towards this will no doubt be, to acquire, what their present education and habits, improved as they are, still deny them, a genuine relish for the simple beauties of nature.

As the public charitable institutions in Tuscany are, for the most part, under the direction of Government—not of individuals, they are shut out from one extensive field of exertion, which is open to British females. Many ladies of rank, however, become Sisters of Charity, a society that requires no vow, and they are indefatigable in visiting the sick. It is they, too, who are the most exemplary in the discharge of what they deem to be the duties of religion, who minister most freely of their substance for its support, and who fill the churches, which, except in Florence, are almost forsaken by the men.

IV. *Education of the Civil Professions.*

In considering the education of the clergy and the nobles, we have seen distinguished talent occasionally struggling with success against the depressing effects of a defective system of early instruction. In contemplating that of the two learned civil professions, law and medicine, a more uniformly pleasing subject awaits us ; and particularly in regard

to the former of these, we shall find a good education producing its natural fruits.

The Tuscan advocates, springing from a class over which superstition and prejudice have the least influence—the middle rank of life, are placed at once by their parents under the best instructors abroad, and receive the greatest advantage from the conversation which passes under the paternal roof, which is generally conducted with a considerable degree of freedom, and relates to the most interesting subjects which can engage the youthful mind. From the best school their neighbourhood affords, which is usually that of the exemplary monks of the Scuole Pie, they pass to the University of Pisa, or that of Siena, where they are required to spend six years in legal and other general studies, previously to their taking the degree of doctor of laws, which is necessary to their practising as barristers, and the examinations for which are very rigorous. The two Tuscan Universities afford the best possible advantages for the acquisition of legal knowledge, and, as far as the young advocates are concerned, they may be considered as, generally speaking, places of industrious and well-regulated study. Thus trained, they are fitted to adorn, and are freely admitted to, the first circles of society, and acquire a polish of manners, and the sentiments and feelings of a thoroughly polite man, in a degree which is rarely to be met with amongst the *nobles*. Their character is no doubt much influenced likewise by the nature of the legal institutions of the country.

The Tuscan code of laws has for the last sixty years been undergoing a nearly uninterrupted process of simplification and improvement, from the mass of confusion and chicanery in which the illustrious Grand Duke Leopold found them in the middle of the latter half of the eighteenth century. Many of the institutions of this great legal and ecclesiastical reformer are still in force. Some of the improvements introduced by the French have likewise remained untouched, and some further progress was made during the reign of the late Grand Duke, Ferdinand III. And although the system still admits of much delay of justice, abuse and corruption, it furnishes a full and unrestrained scope to the eloquence of the advocates, and secures in general that consent of public opinion which is necessary to give their most powerful sanction to its decrees. Almost as soon as a supposed delinquent is thrown into prison, an officer, styled the chancellor, begins the examination of witnesses, which, being committed to writing, forms the basis of his own judgment and that of his colleagues on the day of trial. These examina-

tions, which are private, are conducted with all imaginable diligence to elicit the truth, and until the chancellor thinks he has sufficient ground for forming a judgment, the trial may be continually postponed, greatly to the injury of the prisoner, whether innocent or guilty ; for, in the former case, he unjustly suffers as a culprit ; while, in the latter, a punishment is inflicted on him which forms no part of his sentence. We have heard of trials for murder being delayed in this way for a year and a half, until light at length broke in upon the chancellor's mind ; this we regard to be the crying evil of Tuscan legislation, especially as the chancellor is not obliged to take these examinations in person, but may conduct the whole by his clerk. The eliciting of the truth may be in this way further delayed, or its evidence obscured by the want of skill in the examiner. When the chancellor, who here acts the part of a grand jury, has *returned a true bill* against the prisoner, the evidence of his guilt must be studied by a judge, called '*il relatore*,' in order to prepare himself to give an account of it to his colleagues on the day of trial. They are five in number, sitting together, and the prisoner being released from his chains, is placed before them, not to be tried, but to hear his trial read. In cases of capital crime, the prisoner may, however, on assigning reasons satisfactory to his judges, call for any witness, and have him examined over again by the chancellor in his presence. But this privilege, perhaps through fear of aggravating his case, is, in practice, scarcely ever resorted to by the accused. After the reporting judge has read the *procès verbal*, the *fiscal advocate*, or public accuser, gives the judges his opinion as to the nature of the crime, and the punishment required by the laws. But he is strictly prohibited (according to an admirable provision) from indulging in exaggerated statements, or appealing in the slightest degree to the passions of the judges. This part is left to the advocate of the accused, who next rises, and if the case be one of interest, gives free scope to whatever talents for argument or declamation he possesses. The public is freely admitted, and the writer has listened for many an hour with delight to the eloquent harangues of Carlo Cantini (since made a judge), who during the years 1827, 1828, was in the height of his brilliant career. In one instance, at the conclusion of a three hours' speech of his, in defence of a youth accused as accomplice in a murder, a distinct peal of applause was extorted from the advocates and the audience, of which an instance was not remembered in the criminal court of Florence. It was peremptorily suppressed by the presiding judge, and prosecutions were after-

wards entered against several individuals who had taken part in the expressions of approbation ; but these were merely formal, to save appearances ; and a more effectual remedy was adopted a few months afterwards, by raising this meritorious young advocate to the bench. The fiscal advocate rarely avails himself of his privilege of reply to the defence, or if he do so, limits himself to the correction of matters of fact ; and the judges then retire and give their sentence at their leisure, but in common cases before another trial is begun.

The Tuscan criminal code is considerably milder than the English, and is enforced with equal or greater lenity. To all but cases of atrocious murder, the Grand Duke is open to applications for pardon, and after considerable delay, entreaties (it is said of those of the Grand Duchess) often prevail in cases where a stricter execution of the law would better have answered the ends of public justice, and have had a more favourable influence on the public morals. Highway robbery and house-breaking, as well as premeditated murder, are punishable with death. In a quarrel where implements not coming under the description of arms (such as knives, &c.) are employed, murder is punished with the galleys at Pisa, or with banishment to the unhealthy marsh district of Grosseto. In cases of death arising from duel, if the *challenger* is killed, the punishment is seven years of the galleys ; but if the *challenged*, fourteen years. Atrocious crimes are exceedingly rare, except in the comparatively uncivilized district called the *Tuscan Romagna*, bordering on the Bolognese territories of the Pope, where murders are sometimes attended with circumstances of almost inconceivable horror. Robberies are also common at Leghorn, where there is a great concourse of strangers from all parts of the world.

The *civil* legislation of Tuscany is far more defective than the criminal, giving occasion to much delay and expense. Lawsuits are sometimes prolonged for ten years, and one case is talked of which lasted twenty.* This circumstance is principally attributed, at present, to a change which was unwisely introduced into the code at the restoration, previously to which period the French system prevailed, according to which what is called the '*incident*' to a suit (which we may interpret by what is known, by grievous experience, to our Chancery suitors under the name of question referred to the Master) was argued and decided by the same judges, and, if time allowed, at the same sitting with the suit

* But what is this compared with the delays of our own Court of Chancery ?

itself ; whereas, according to the present *restored* system, the *incident* becomes a suit within a suit—nay, even may itself contain an incident which must be tried in another court, and upon its separate merits.

A Tuscan advocate, in pretty good practice, may be sure of making 1000 crowns (250*l.*) per annum, upon which he can live genteely ; and there have been instances of men in the receipt of 6000 per annum : so that an elevation to the bench, with a salary of only 800 crowns, is not coveted by any who are in good health and in the prime of life. The most celebrated Tuscan advocates since the elevation of *Cantini*, last year, and the death of *Collini*, a few months ago, in the plenitude of literary and legal honours, are—
(1.) *Aldobrando Paolini*, editor of an edition of the celebrated work of *Beccaria*, with a great variety of original dissertations and commentaries ; of a Treaty on Commerce, under the French regime ; a Life of *Pignotti*, the celebrated historian of Tuscany ; and a Memoir addressed to the Society of the *Georgofili*, *against* the measure of the Government for the valuation of estates, but *published by order of the Government*, the history of which is too singular and too illustrative of the state of things under the government of the Tuscan princes to be omitted. Previously to 1817 the valuation of estates, with a view of imposing the land-tax, was effected by a commission to inquire into the average value of land in each commune (or district, including one or more parishes according to their extent), but without power to question on oath any individual respecting the value of his *own* estate. But, in the above year, the Grand Duke Ferdinand III. established an office in the capital for the registry of the value of each individual estate in Tuscany, called *l'ufficio del Catasto*, with power to examine by commissioners on the spot each individual, should they judge it necessary, annually upon the value of his estate. This measure was met by the bold young advocate both with argument and ridicule in his essay, read on the 8th July, 1821. His chief objection was the clog it imposed upon agricultural improvement, by making a man immediately pay for any benefit he might confer on the public in this way because he also benefited himself. The delivery of this essay no sooner reached the ears of the Directors of the Catasto than they made vehement complaints to the Grand Duke of the audacity of the man who had called in question a measure of the government, and required that signal punishment should be inflicted on the author. The Grand Duke complied so far only as to require the author to give the Catasto

a copy of the manuscript. To make the matter more imposing, perhaps, gens d'armes were sent to his dwelling to demand the *Essay*, but when the Directors, after having read the work and pronounced it to be both absurd in itself and injurious to the Grand Duke, required proceedings to be instituted against him, Ferdinand replied that the best punishment would be to publish it, that the public might judge of its demerits, which was accordingly done at the expense of the Government, without any comment except a short advertisement, stating that, as previously to the adoption of the present system, the Academy of the Georgofili, including Paolini, had been invited freely to communicate their sentiments to the *Catasto*, this office considered itself unfairly used in having its measures publicly criticized after they had been for some time in force. So singular a turn do affairs sometimes take under a *mild*, perhaps it will be said a *weak*, despotic government.

The system of the *Catasto* appears to be an oppressive one; yet all the measures of Government are carried into effect with such a wonderful degree of good humour and lenity, as to hush the rising complaint on the lips of the subject. (2.) *Baldasseroni* is author of a work on commercial duties, which forms a text-book in the Courts, as do the works of *Collini* in the Colleges. (3.) *Carmignani*, of Pisa, is author of a course of lectures on criminal jurisprudence, and of many essays on various subjects of literature. (4.) *Cremani* was formerly Professor at Pavia, and is author of a course of lectures on criminal law; but his memory will long survive him on a very different account. He was Minister of the Home Department (*Presidente del buon Governo*) in the year 1799, during the retreat of the French, and instituted prosecutions against all those who had manifested republican principles by any open acts of adhesion, to the almost incredible number of 24,000. Many were brought to trial, and all were imprisoned: none were put to death, because capital punishments had been abrogated by Leopold thirty years before, and his laws were then still in force. (5.) *Gillies*, whose family is of English origin, is a much admired pleader at Florence, as also are (6.) *Benassi*, (7.) *Capputti*, (8.) *Landriui*, and (9.) *Cerciniano*. (10.) *Galassi*, of Leghorn, although young, promises a most brilliant career. (11.) Doctor *Guadagnoli* is not distinguished as a lawyer, but is the author of a poem entitled '*Il Naso*', which is full of learning and humour, a style which is perfectly new in Tuscany.

All resident subjects in Tuscany, whether natives or

cany has its academy of science and literature under the patronage of the State, besides new societies which are frequently arising in private life.

The University of Siena contains, in the present year, 300 enrolled students, of whom 200 are legal students, 80 destined for the profession of medicine, 20 to be apothecaries (*i. e.* authorized dispensers of medicine), and only 20 who have various miscellaneous objects in view ; but no account is taken of such students as merely attend the lectures. The salaries of the Professors amount to about 300 crowns, besides a small sum proceeding from fees for additional lectures in their own houses : they are twenty-three in number.

At Pisa there are 800 students ; about 50 of these are young Greeks. There are now twenty-nine Professors, whose salaries amount to nearly 600 crowns each. At all the seminaries and colleges the sum demanded of students is so low that it may be considered as only an equivalent for board. Instruction is uniformly gratuitous. At both the Universities scholarships have been founded, to the benefits of which students are admitted by examination. At Siena, the "luoghi Berlingucci" are exhibitions enabling students, after taking degrees, to prosecute their studies for six or even ten years at foreign universities. Some have gone to Edinburgh, and have been maintained there in this way for several years.

The education of *physicians* and *surgeons* in Tuscany is very complete, as far as professional knowledge is concerned, although they fall far behind the advocates in general knowledge and cultivation. Like that of the legal, the education of the medical profession is carried on to great advantage at the Universities of Pisa and Siena. But the Medical and Surgical College, connected with the Hospital of Santa Maria Nuova, at Florence, is the best medical school in Tuscany. As this institution, munificently endowed by the Government and by individuals, contains beds for 2000 general patients, besides a lying-in hospital and a lunatic asylum connected with it, and a foundling hospital in its immediate vicinity, it affords ample opportunities for the study of the various stages of actual disease ; and the bodies of all patients dying in the hospitals being given up indiscriminately to the purposes of science, furnish the necessary variety of subjects, without driving the students to odious and demoralizing means of obtaining them.

In chemistry they enjoy the benefit of the services of Professor *Gazzeri*, who, to scientific exactness and a tasteful

foreigners, laymen or ecclesiastics, pay the same taxes and are amenable to the same laws. The clergy are entitled to no tithe on the produce of the soil, unless, in the comparatively rare case, that they can prove that their annual professional receipts from their parish do not exceed 80 crowns per annum (20*l.* sterling), which is deemed a sufficient maintenance; so that one great source of employment to ecclesiastical lawyers is cut off.

The criminal court of Florence has jurisdiction over the whole Grand Duchy, except Siena, Piombino on the borders of the Roman States, and the Island of Elba, which have separate jurisdictions. There are fifteen criminal judges at Florence, ten of whom sit in two bodies of five at a time, in turn, and the remaining five form, by the nomination of the President, a third court of revision, when a new trial is moved for and obtained by the advocate of the accused, which may be done on the ground of informality or partiality, *i. e.* if one court of five judges can be proved to the satisfaction of a second court of five to have decided partially or irregularly, a third court of five, different from the other two, hears the cause again; so that the matter comes before the whole judicial body in the course of the proceedings. The civil court has four judges.

As the advocates have the greatest influence on the general literature of Tuscany, this is, perhaps, the most suitable place to introduce a few particulars in relation to it. This class of society are the principal supporters of the *Anthology of Florence*, a monthly publication devoted to science and literature, conducted with great ability, displaying extensive information, and written in the most elegant style. It sells 1500 copies. A monthly journal is likewise conducted at Pisa, in the English language, called the 'Ausonian,' with the view of conveying to the English in Italy and at home correct ideas of the progress of Italian literature. There are likewise in Florence, and in many other towns, small 'Accademie,' as they are called, chiefly supported by the young advocates for purposes of general literature. The writer has attended, with great interest, a society of this kind at Florence, for the explanation of Dante's poems. The Academy of *La Crusca* is made up of various classes of society: it has nineteen resident members, who receive a small salary from the Government, and an indefinite number of corresponding members. The *Accademia Vuldernese* holds its meetings in different towns in rotation. The *Accademia Tegea* of Siena has done much for the diffusion of natural science. Every city and considerable town in Tus-

cany has its academy of science and literature under the patronage of the State, besides new societies which are frequently arising in private life.

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In chemistry they enjoy the benefit of the services of Professor *Gazzeri*, who, to scientific exactness and a tasteful

delivery, adds the charm of the purest Tuscan style, a flowing diction which never wants nor needs to alter a word or syllable. To be present at his lectures is one of the highest treats which this city affords to the stranger. He has published two volumes 8vo. of his lectures, and a variety of minor scientific pieces on subjects relating to the connexion between agriculture and chemistry, &c.

In pathology and physiology, *Magheri* is also distinguished. He is most felicitously graphic in his descriptions, which serve as an admirable substitute for the presence of the objects themselves; classical in style, and impressive in delivery. The want of a good text-book, as a guide to the private studies of his class, is much felt by them, and the Professor has it in contemplation to supply this want by the publication of a compendium of physiology and pathology from his own lectures. He is much to be admired for that rational and philosophical *morality* which runs through the whole of his lectures, and strongly attaches the students to his person. Such professors as Magheri are needed to effect the moral regeneration of Italy.

Betti is an able lecturer on 'surgical institutes,' comprising operations on the dead subject. He has lately (May, 1830) accepted the direction of the Lazaretto of Leghorn.

But by far the most instructive tongue in the College of Florence is one which fanaticism and prejudice have lately succeeded in silencing—we refer to Professor *Philip Uccelli*, whose lectures on comparative anatomy the writer listened to, in the spring of 1828, with unmixed satisfaction. More curious matter, comprised in fewer and better chosen words, he never heard. His offence was his candidly explaining and discussing in his lectures, but with an obvious leaning towards it, the phrenological system of Gall and Spurzheim. The publication of his course of lectures, in 1826, having rendered the good or evil of more extensive influence on the minds of the medical students, the alarm was raised by the priests, and the Grand Duke was with great difficulty persuaded to refer the matter to the Theological College of Pisa, who reported, in September, 1828, that the sentiments contained in these lectures rendered it undesirable that Professor Uccelli should any longer have the direction of the studies of the Tuscan youth. Uccelli was, therefore, silenced, but, at the same time, made Emeritus Professor for life. With such tenderness is every arbitrary act accompanied in Tuscany, that the people cannot find in their hearts to be angry.

Siena also enjoys great reputation as a school of medicine, especially since the reforms introduced into the discipline and modes of study in the University, and all the numerous other institutions for education in this city, by the influence of the late intelligent and excellent Governor *Bianchi*.

Vaselli is here an able, distinct, and patient lecturer and demonstrator in anatomy, as is *Mazzi* on the institutes of surgery and forensic medicine.

Stanislaus Grotanelli, clinical professor here, had obtained high reputation by his medical tracts on the spleen and on other subjects while settled at Florence. His manner as a lecturer, both at the bedside of the sick and in the chair, is marked by that easy familiarity which encourages the pupil to become his own instructor, by obtaining solutions of those particular doubts which press upon his own mind, and which stimulates to the successful study of science from feelings of attachment to the instructor. This last remark is, in a considerable degree, applicable to the other professors of this University, eight of whom the writer has heard lecture. He found Professor *Puccioni*, in canon law, literally a peripatetic philosopher, walking about his class-room, encouraging the timid (who might have been deterred from speaking aloud from their places) to propose to him their difficulties, in order that the whole class might receive the benefit of the further illustration of the subject which they drew forth. In order to learn how far professorial pomp may with safety and advantage be laid aside, and the affections of the student won to his studies through the person of his teacher, a visit must be paid to the University of Siena.

To the *non-medical* observer, who is anxiously noticing every symptom of intellectual, and, above all, of moral improvement in Tuscany, perhaps the greatest service which Doctor Grotanelli has rendered to his country will appear to be his publication of an introductory lecture to his course, entitled '*Sopra il Giuramento d'Ippocrate*,' in which the moral bearings of the medical profession are pointed out with a degree of taste, judgment, and good feeling which we have never seen equalled, and which render it desirable that this little work should be in the hands of every English as well as every Italian student of medicine.

The most celebrated physicians in the capital at present are—(1.) *Torrigiani*, who has the title of *Archiatro*, or principal physician ; (2.) *Cassini* ; (3.) Professor *Nespoli* ; (4.) *Bruni*, celebrated for his skill in lunatic cases ; (5.) *Lazzarini* ; (6.) Doctor *Appolloni* enjoys great reputation at Pisa, and has published several medical works ; and (8.) *Studiati*,

of Pisa, is a much admired lecturer on pathology. To these must be added those physicians and surgeons also mentioned, (9.) Grottanelli, (10.) Magheri, (11.) Betti, (12.) Uccelli.

The examinations for degrees are conducted by twelve physicians and twelve surgeons. The expense of fees for diplomas in medicine, as in civil and canon law and theology, are about 10*l.* When the student is of the Catholic communion, a confession of faith is required of him, and the diploma runs in the name of the Archbishop of the diocese, who is patron of the Universities; but when the student is not a Catholic no confession is required, and the diploma runs in the name of the Prior of the University, who is a layman. As doubts have often been expressed as to the extent of liberality shown by foreign Catholic Universities, the writer thinks it proper to add that he has *seen* the diploma of a Greek physician received from Siena, under the above circumstances, without confession, and running ‘*Nos Stanislaus Grottanelli*,’ &c., that physician being then Prior of the University, instead of the usual ‘*Nos, &c. Archiepiscopus Sanenis*.’ No other confession, or act of conformity, is required in the course of studies; and it would be well if even this were abolished, for, although there can be no hardship in requiring a Catholic to say that he is a Catholic, where is the reasonableness of requiring him to do so as a condition of becoming a physician or barrister?

The degree of LL.D. is not granted, as in Great Britain, to denote general literary merit, or merely as a compliment to great men; but many persons study civil law, and take the degree, without intending to practise the legal profession. This was the case with the celebrated Pananti, known for many years in London as theatrical composer, and who, since his return to Tuscany, has done essential service to the purity of his native tongue by the publication of three octavo volumes of prose and poetry, which have received from the Academy of La Crusca the stamp of *classical*.

V. Education of the People.

Our readers will remember that, in the course of the discussions to which Brougham's celebrated bill for the improvement of education gave rise, that learned gentleman affirmed that sufficient sums had been provided by our pious ancestors, if well and fairly employed, to afford gratuitous instruction in Latin and Greek to every male child in England and Wales. It is the opinion of persons well ac-

quainted with Tuscany, that the same observation might be made with respect to this country. But, alas ! how are the benevolent intentions of those who went before us frustrated by the negligence and corruption of the present generation. The confraternity of the *Misericordia*, for visiting the sick, burying the dead, &c., appears, after all, to have acted the wisest part, for it spends within the year all, or nearly all, that public beneficence has bestowed upon it during that period, and is, notwithstanding, the richest of all the charitable institutions in Tuscany, the public beneficence having never failed it for six centuries.

Compared with any of the Catholic countries of Europe, Tuscany may certainly be said to contain a well-informed population. It is true that, in the remote parts of the country, there still are many persons unable to read or write ; and they might be regarded as brutally ignorant, were it not that, by being surrounded on all sides by well-informed persons,—by going several times a week to market, at some town, for the sale of their commodities,—by attending country theatres, where the finest compositions are recited and placed in action before their eyes,—and by hearing the works of their classical authors repeated by heart by some of their neighbours, together with a natural quickness in availing themselves of whatever means of knowledge may happen to come within their reach, they acquire a great superiority over the uneducated portion of all other countries. We have known several excellent reciters of Tasso, Metastasio, and Guarini, who were bungling readers of those authors, and, although almost destitute of education, it was evident that their minds were considerably enlarged by the familiarity they had acquired with them. It should likewise be remarked that the Italian language presents greater facilities for self-instruction than, perhaps, any other in Europe ; for the labour of learning to read and write well arises principally from the difficulty of spelling, and, in Italian, every syllable, with scarcely an exception, being pronounced as it is written, orthography becomes the simplest acquisition possible. The Tuscans may be described as being the earliest enlightened, and, to this day, the most enlightened people of modern Italy. This is evinced by the fact that their language is become the language of Italy, and from the circumstances under which this took place. The modern French is the dialect of Picardy, diffused throughout the whole kingdom as a badge of the political supremacy of Paris and its adjacent country over the conquered provinces. The Greeks, the Romans, and the Saxons carried with them their languages, as a matter of

course, into the countries they subdued by their arms. But Tuscany, without any political ascendancy to operate in her favour, has spread her dialect from the Alps to Reggio and Syracuse—a plain proof that it was the language of learning and the arts, of civilization and refinement. This country, too, has the advantage of being, for the most part, undisturbed by those tumults and fruitless attempts at change of government by which, in other countries, the progress of improvement has been arrested. They enjoy, in practice, that freedom after which the other people of this peninsula are panting, and are perfectly in unison with their governors. The public spirit in Tuscany is completely monarchical. Republican ideas ferment in the minds of only a few isolated individuals of little influence, a circumstance which enables the sovereign to rule his people with gentle sway. In 1821, when all the rest of Italy was burning to throw off, or had actually thrown off, the yoke of despotic power, in Tuscany only one secret lodge of Freemasons was discovered which aimed at the establishment of a constitution in place of the arbitrary authority of the Grand Duke. It was composed of heads not having any influence over the nation at large, either from property or talent, youths of from eighteen to twenty-one years of age. The government was satisfied with imprisoning them for a very short time, and then, without trial, conducting them home to their parents, with an admonition to the latter to take better care of them in future. Several of the old Freemasons are at this moment in the employment of the government of Tuscany—one is a judge, another a professor.

So rare are capital crimes in Florence, that, in twenty-five years, there have been only two murders committed, and both of those by Romans. There is in this country not a single cavaliere d'industria, who so much infested some parts of the Roman and Neapolitan states, until the Austrians, in a great degree, suppressed them. In the autumn of 1827, when two persons, on two successive nights, were knocked down and lost their watches near the Ponte Vecchio, at Florence, the whole city was in confusion and horror at so unheard of an atrocity!

Although the plaiting of Leghorn straw, the making of carpets, cloth, silk, porcelain, and some other manufactures, employ a considerable number of hands in the country, the principal employment of the common people is agriculture, and they live for the most part in great comfort: for either they are tenants, and, under the name of factors, enjoy half and usually the best half of the produce, so that it has passed

into a proverb, *Fattore, Fatto-rr',* the factor is the king ; and the more numerous his family is the better, for the more cheaply can he cultivate the land he occupies, which is sure to provide sustenance for them all ; or he is a little proprietor, and enjoys a moderate and comfortable independence ; or if a day labourer, although his wages be small, his employer will hardly allow him to go to bed without a good supper and a pint of the inferior wine of the country. The city of Prato employs many hands in the cloth and other manufactures, but in general the artisans of each district work only to supply the demands of the district itself. The Leghorn-hat manufacture is flourishing, and employs 20,000 hands chiefly in the small towns of *Brozzi*, *Legnaja*, *San Domino*, and *Campi*, in the neighbourhood of Florence, along the road to Leghorn. The ancient silk manufactures, once so famous at Florence, Siena, &c., are very much in decay.

The manners of the country people are simple and innocent. The ceremonies of religion are for them a principal object in life. The festivals (and by festival is understood the mixture of religious ceremonies with public games, fireworks, and every kind of rejoicing) are of annual occurrence on the anniversary of the patron saint of each parish or commune, as well as those specially set apart by the church for the observance of all its members. The passion for the theatre is here not only harmless, but probably highly favourable to the national morals, and is so absolutely universal that the lame beggar, as soon as he can get twopence, will hobble away to the twopenny theatre, where, in Florence, he may weep over a tragedy of Alfieri or Niccolini. The humanizing effect of the theatre in this portion of Italy arises from its language being that of the people themselves, whereas, at Genoa and Naples, pure Italian is but imperfectly understood by the lower classes. It is astonishing how perfectly decorous as to morals and order, and how respectable in point of talent, a twopenny dramatic representation is in Tuscany. Where the town is too small to support a theatre even of this humble class, the inhabitants form a theatre of dilettanti, and sing or act either within doors or under the canopy of heaven—anything rather than have no theatre.

Gaming is not a Tuscan passion. The nobility are led into it by their visitors from the Palais Royal and St. James's-street ; but the amusements of the common people are inexpensive and harmless. 'The most that is risked is a bottle of

wine, for the most part to be drunk in common by the winners and the losers.

Servants and the common people in the large towns can generally read and write ; and it is the fault of parents if they do not learn to do so in the country, as the provision for gratuitous education is universal. Besides the schools for elementary instruction, including Latin, which every commune (comunità) is obliged to maintain, there are thirty Lancasterian schools for boys and girls scattered over the country, of which the monks of the Scuole pie, who were at first hostile to them, are now friends and patrons, having, since November, 1828, adopted the system themselves in one of their schools at Filigne. In every one of the six sections of Florence, and in the corresponding divisions of other towns, there are likewise gratuitous schools, *well conducted*, as the consequence of their being under the immediate influence of public opinion. And there is a noble institution where 800 girls are boarded, and taught, and provided for in future. The very *Casa di Lavoro*, House of Correction, now has a respectable school attached to it. Wherever the nuns have a conservatorio for young ladies, they are obliged likewise to keep an open school for reading, writing, and work for the lower class, the nuns of Florence being alone excepted from this obligation in consequence of the abundant provision otherwise made here for gratuitous female instruction.

The good people of Tuscany, it may readily be supposed, are not without their superstitions. In country places there are not wanting believers in the power of magicians, sorcerers, and witches ; with whom the number 5 is unlucky, and 13 brings death ; who believe that the birds not only figuratively but literally sing the praises of God, because the preacher tells them that they do sing his praises ; who pay to the images of saints a kind of worship which the Church forbids, *i. e.* direct religious homage, and who regard church bells with an undefined reverence. But if these prove a feeble, they are no indications of a corrupted mind ; and amongst nations equally civilized, it may be safely affirmed there is none more orderly or more free from great vices.

VILLAGE SCHOOLS OF INDUSTRY.

Proposal for the Establishment of Village Schools of Industry, submitted to the consideration of Landowners and Clergymen. London, 1831.

THE object of this proposal appears to be, to effect changes in the mode of educating the children of labourers and of the poorer classes of workmen and tradesmen, not very dissimilar from those which have already been recommended in this Journal (No. II.); for the fundamental principle of the proposed schools is, 'that every labourer should be taught all the knowledge which bears immediately upon his situation.' The proposers also enforce with great earnestness the truth, that labour is not only valuable as a source of wealth, but is the only means of acquiring or of preserving virtuous and religious habits. It is indeed no exaggeration to say, as a proof of the vital importance of making the acquisition of industrious habits a chief object of early education, that habits of industry and labour are powerful auxiliaries in the suppression or restraint of depraved desires. Human nature is so constituted, that idleness is, in almost all cases, the parent of some form or other of vice; so that to instruct young men and women in useful labour, and to secure to them certain advantage from it, and thus train them to rely upon it as a source of support, comfort, and independence, is an object worthy of the deep consideration of those who, by their position as proprietors of land, or by their profession as clergymen, have it in their power to promote it. Those who are really acquainted with the ordinary attainments and ordinary feelings of the poor, and are at the same time free from any desire to prolong the degradation of those born in humble stations, are alone to be entrusted with such a task.

Inconvenience is sometimes produced by attempts to act too precisely according to plans drawn up even with the greatest care for the advancement of benevolent objects. Every plan is formed by those who cannot avoid mentally applying it to a particular locality or portion of the community with which they chance to be best acquainted. When the plan comes to be acted upon in other places, or applied to the condition of other portions of the community, unexpected difficulties are necessarily met with, and discouragement is created; although the difficulties are commonly such as are removable by slight modifications of the original design. The discouragement is generally taken advantage of by the numerous inconsiderate, indolent, and selfish persons, who regard the introduction of *any* new plan, however good

in itself, as unnecessary, and who are glad to find an apology for pronouncing it impracticable and visionary. Whoever is desirous to establish village schools, must expect these difficulties ; but they are not such as should divert any philanthropic individual from persevering in what may be the means of effecting the most extensive and the most lasting improvement in the character and happiness of the many, whose lot it is to support themselves by the labour of their hands. If we are anxious to prevent the increase of pauperism and crime,—if we desire to see a population peaceable and contented, and to maintain the security of all classes of people in this country in time to come,—these ends will perhaps be best attained by reviewing the existing system of education for the poor, and considering whether it may not be so amended as to obviate evils which all acknowledge to exist, and which are certainly not of a nature to be spontaneously diminished.

The following are the heads of the proposal which has led to these observations :—

‘ I. The object of such a school is to make industry the leading feature : to make it subservient to the formation of character, and the acquisition of as much knowledge as may be deemed necessary : to render it beneficial to the neighbourhood, and to make it pay its own expenses.

‘ II. A piece of ground should be provided of a sufficient size, according to the number of children to be taken. It should be the property of the owner of the school ; or if on lease, the landlord should pay for all improvements at the expiration of the lease. A piece of waste land would not be objectionable (provided the soil were easy to cultivate), because it would be cheaper, and the result, if successful, would be more decided.

‘ III. A man should be hired to cultivate the ground, part with the plough or spade, part as a garden. He must be intelligent generally, and understand his business thoroughly ; he should be of a kind disposition, and should comprehend and approve the objects of the school ; he should undertake to communicate to the children all the knowledge he possessed, and consider their instruction as of still more importance than his manual labour—not, however, neglecting the latter ; he should direct their labour in the most useful manner, both for the garden and themselves.

‘ IV. A schoolmaster should be obtained for the direct teaching of the children. He must understand that the chief sphere of his teaching would be in the garden and work-shops—making himself acquainted with the processes going on, and with the principles of gardening and farming as well as the practice. By means of the interest which the child would feel in the objects before him—their nature and uses—much more would be learnt than through any system of book instruction not illustrated by visible and tangible

facts. The qualities and produce of the soil, and the habits of the animals fed upon it, would naturally become subjects of inquiry, and afford opportunities of useful information. The schoolmaster must work with the children. When the gardener points out the work required for the garden, the master must distribute the work, and superintend it. The children must work in groups, under monitors, as far as is possible. Each child must be employed, down to the very youngest, who must have some work allotted, as picking stones, sticks, counting cabbages, &c.

‘ V. The labour must be adapted to the age ; and, regularly at stated hours, the children must adjourn to the school, or take lessons in the open air, according to the weather or convenience. There they would learn reading, &c. ; great part of the lessons, exclusive of scriptural instruction, would consist of explanations respecting the objects, animate and inanimate, in the garden, taken from books adapted to this purpose. Besides gardening, the children should be taught such trades as local and other circumstances might render desirable : masonry, shoemaking, tailor’s, carpenter’s, blacksmith’s work—netting, knitting, &c. : some of these might form also direct subjects of instruction.

‘ VI. The girls, under the direction of a competent female superintendent, should be taught household-work, washing, cooking, baking, &c. They should not be exempt from out-door labour—its healthiness is a recommendation for all.

‘ VII. A cottage must be found for the gardener and schoolmaster, but all the other buildings should be erected by the labour of those persons and the children. The convenience and comforts of the inmates should grow gradually, and in proportion to their own exertions. If instructed in classes, they might use any small room that could be obtained for their temporary accommodation. The first thing to be erected in addition would be a large shed. If this were begun on a proper plan, it would be enlarged by degrees till it answered every purpose. The children would soon pave the floor with stones, if directed. The building would serve for a school, for workshops, and for a place of exercise in bad weather.

‘ VIII. A great object would be to collect manure ; cattle must be kept for this purpose, and every other means resorted to. The children might be usefully employed sometimes in collecting and fetching it from a distance. The parents might be encouraged to keep pigs, and be supplied sometimes with food for them, giving the manure in return.

‘ IX. Besides the regular work of the garden, &c., the children should have gardens of their own, of which the whole produce should be their own, to carry home to the parents. The children should be allowed to bring linen from home to wash, and to make articles of furniture for presents to the parents, or to mend any articles about the house.

‘ X. The objects of the school should be fully and patiently explained to the parents, who should be invited to second them. The privilege of purchasing the garden produce, as well as the manu-

factures of the school, at a lower price from the school shop, should be offered to the parents ; and the rewards of the children should be composed of such articles as would be valuable to their families. Give the parents, in short, as great an interest as possible in the school, as experience pointed out the best mode of doing it. Let them feel the school to be, as it were, their own. Let them see that they reaped all the advantage, except in the gradual improvement of the property ; but let this improvement benefit them in a *palpable* manner. Here they might bring their assistance, viz.—labour to the school, as a common fund ; a *deposit* of labour, to be returned in produce, or in education to the children.

‘ Whatever trade a parent exercised, let him at his leisure time give his labour or instruction to the school. The complaint is, that the parent cannot get employment—then he would have more time to give to the school. Invite a stocking-maker, or weaver, &c., from an over-peopled manufactory, to settle near the school, teach the children his trade, work for the neighbourhood, and vary his labour, or work at leisure hours in the garden. His health, comfort, and character would improve. It would be easy to keep a labour-account of hours’ work against every one who gave his labour to the garden ; this would be valued and repaid in produce.

‘ XI. As the children would improve daily, and their labour become more valuable the longer they stayed, it would be right to enter into a contract with the parents, to continue the children at the school a certain number of years. This would not only repay the school more completely, but would promote the general objects of the establishment ;—the formation of good habits, and the acquisition of practical knowledge.

‘ XII. Of course, tools of all kinds must be provided by the proprietor ; the mode in which he would look for remuneration would be, the payment of the children, their labour in garden produce, and the permanent improvement in land and buildings. He would also form a collection of books for the school, containing the requisite information on the subjects of their labours.

‘ XIII. The Bible should not be made a class-book, but read at stated times as a book of divine instruction, and proper passages learned out of it. Doctrinal religion should not be taught in the school ; but what is taught should be entirely practical, and made to go hand in hand with the work.

‘ There should be a plan of the garden and premises. This plan should be studied in the school, and would exemplify the elementary principles of land-measuring, &c. Each boy, as he grew old enough, should make one for himself on a reduced scale. The children should learn the distances, in feet, of all parts of the garden, and the number of square feet in the whole, and in each part ; the plants growing in each bed, their number, value, &c. The children should be allowed to propagate plants for themselves, for pleasure or for sale ; and in the course of time might have the means of erecting a green-house.

‘Exact registers should be kept of all the occupations and expenses of the school: these should form the study of the children, and from them the arithmetical sums should be chiefly taken.

‘XIV. A savings’ bank should be established in the school for the children.’

THE STATE OF EDUCATION IN FRANCE.

In the year 1830, the Society for the Diffusion of Useful Knowledge addressed a series of questions to the *Société pour la Propagation des Connaissances Scientifiques et Industrielles*, on the present state of education in France. These inquiries have been answered in the most prompt and satisfactory manner by a written communication from the French Society, who have also printed their reply in the *Bulletin des Sciences Géographiques, &c.*, for November 1830. We conceive that we cannot express our sense of the great obligations which we owe to the French committee, in any better way than by communicating their valuable information to our countrymen through the medium of this Journal.

We give first each question that was proposed, and then the answer.

First QUESTION.—*What measures has the government taken for the education of the different classes of the community, and what kind of instruction has been adopted?*

ANSWER.—To answer this question, we must give a sketch of the different sorts of instruction, and the different kinds of schools in France. There are three kinds of instruction—primary, secondary, and superior. The primary instruction comprises those branches of knowledge which are indispensable, such as reading, writing, arithmetic, with some other subsidiary branches which are spoken of more particularly in the answer to Question 3. This instruction is given in the schools called Primary or Elementary. The secondary instruction comprises knowledge of a higher kind—Greek and Latin, history, geography, rhetoric, philosophy, elementary mathematics, physics, chemistry, and natural history. It is necessary to have studied these various branches, in order to obtain the degree of *bachelier-ès-lettres*, which degree is an indispensable requisite for admission to the courses of instruction, the examinations, and theses in the various faculties, of which we shall speak hereafter. For the present it will be sufficient to state, that a person cannot become an advocate, or a physician, or a professor in letters or science, or a graduate in theology, without being *bachelier-ès-lettres*. The *baccalauréat-ès-lettres* is in fact the certificate that the course of secondary instruction has been gone through, and the attainment of it is the condition on which a person is allowed to pass on to the superior instruction.

The secondary instruction is given in five kinds of establishments;

royal colleges, communal colleges, private colleges, institutions, and boarding schools (pensions).

The royal colleges are those in which the directors (*administrateurs*) and professors are paid by the state. In 1829 there were thirty-eight royal colleges in France. During the year 1829, we believe, two new ones were established. Further details will be found in the answer to the fourth Question.

The communal colleges are secondary schools maintained by the towns, their heads and professors being paid from the communal revenues. These colleges are very numerous in France; there are above 317. But all these colleges are not *de plein exercice*, by which term is meant, that many of them do not give instruction in all those branches of knowledge which enter into the secondary instruction. There are not more than 120 of these colleges which are *de plein exercice*. In a communal college, *de plein exercice*, a student can go through the complete course, as in a royal college; and on leaving this communal college, he can be admitted to the degree of *bachelier-ès-lettres*. If the communal college is not one *de plein exercice*, a student can only commence his course there; if he wishes to take his degrees, he must finish elsewhere. For example, one communal college may have no philosophy class; in that case the student, if he wishes to become a graduate, must go to some other establishment for his philosophy: another communal college may have neither a rhetoric nor philosophy class, and the student consequently must study rhetoric and philosophy in some other place, if he intends to graduate.

The private colleges are private schools, in which the secondary instruction is given complete; the directors and professors are required to have the same qualification as the same officers in the royal colleges. For the directors, this qualification consists in having obtained the degree of *licencié-ès-lettres*, or of *licencié-ès-sciences*; and for the professors, the title of *agrégé*. The answer to the fourth question will explain the meaning of the title of *agrégé*. Properly speaking, there are only two private colleges in France, that of St. Barbe, and that of Stanislaus. Both of them are in Paris. The state makes no allowance to these two establishments, which are supported entirely, as well as the directors and professors, by the receipts from the pupils.

The *institutions* are also private schools, founded with the sanction of the University. The head or principal of an institution must be *bachelier-ès-lettres* and *bachelier-ès-sciences*. The masters whom the principal employs are not required to have degrees; it is sufficient for these masters, who are called *rédacteurs*, to be approved by the rector of the academy. (The meaning of the term *rector of the academy* is explained under the second Question.) The institutions receive no aid from the government; they are purely private speculations. The institutions are divisible into several classes. Some are established in towns where there are colleges either royal or *de plein exercice*; others are established in other places. When an institution is established in a town where

there is a college either royal or *de plein exercice*, the principal is obliged to send the youths who are above ten years of age to attend the college classes. Accordingly the boys who are past this age are boarded and lodged in the institution ; and in the school-room of the institution they make preparation for their classes, the attendance on which takes place in the college. They have *répétiteurs* in the institution, but they attend the courses of the professors of the college.

The institutions established in places where there are no colleges, are of two kinds ; institutions *de plein exercice*, and institutions not *de plein exercice*. There is only a small number of institutions *de plein exercice*. They are those of Juilly, Vendôme, Pont-Levoy, Sorrèze, Fontenay-aux-Roses. There may be one or two more. In the institutions *de plein exercice*, the secondary instruction is given complete ; and the youths who leave these schools are admitted, like those from the royal colleges, to the examination for the *baccauléat-ès-lettres*. We ought to remark that, according to the imperial decree which established the University, no institutions *de plein exercice* were allowed to exist, even in those places where there was no college. This decree forbade the principals of institutions to carry instruction beyond the *classes of humanities*. This prohibition was part of the monopoly system of instruction which the decree organized, and which the chief ruler considered as one of the main springs of his government ; but this monopoly has been gradually giving way since the overthrow of the imperial power, and has in various respects lost ground. This accounts for the successive establishment of various institutions *de plein exercice*, which are so many partial triumphs over the system of restrictions and privileges. Some of these institutions of which we have been speaking, assume the title of college ; but this is an unwarrantable assumption, because their principals and professors have not the requisite qualifications.

The institutions which are established in places where there is no college, and which are not *de plein exercice*, give an education more or less extended, but not complete. A student on leaving these establishments cannot become *bachelier-ès-lettres*.

Lastly, *pensions* are like institutions, houses for private education. They differ from institutions in two respects :

1. The master of a boarding-school (*pension*) is not required, like the principal of an institution, to be *bachelier-ès-sciences* ; it is sufficient if he be *bachelier-ès-lettres*.

2. In these *pensions*, they are not allowed to extend their instruction beyond the inferior classes, those of grammar, the elements of arithmetic, and geometry. Consequently there are no *pensions de plein exercice* ; and a student can only commence his classical studies in a *pension* : he must finish them elsewhere. In all other respects the regulations which apply to institutions apply also to *pensions*.

The number of institutions and *pensions* in France is about 1300 ; and the number of youths who receive the secondary instruction in the various kinds of establishments described above, is more than

50,000. Among the youths to whom their parents wish to give a liberal education, there is a considerable number who are designed for commerce, or other pursuits not professional. For them the study of the ancient languages is of less use than an acquaintance with such branches of knowledge as may be useful in their future occupations. This class of pupils requires a separate kind of education. The University, such as it was transmitted by the empire to the government of 1814, so far from establishing this kind of education, opposed the introduction of such a system into private schools. The general and absolute obligation to send the youths to attend the college classes did not permit the schools to form special courses of study adapted to prepare youth for commerce and other branches of business. In 1829 an attempt was made to remedy this inconvenience, which was effected in two ways: first, by establishing in several royal and communal colleges separate courses of study for those youths designed for commerce, &c.; and secondly, by authorizing the principals of institutions, and masters of boarding-schools, to form similar classes, the pupils of which are excused from attendance on the college classes. In this way the care of the government and individual enterprise have united in supplying a species of instruction which is indispensable.

It remains to say something about the secondary instruction in the ecclesiastical schools; for if we were to omit giving a summary view of this department, the reader would have but a very imperfect idea of the condition of the secondary instruction in France, and he would be unable to comprehend the serious difficulties and the important political discussions which these ecclesiastical schools have given rise to. When the Catholic worship was re-established in France, a seminary for theological studies was founded in each diocese. It was the intention of the government that youths designed for the church should prosecute their classical studies in the ordinary schools, and, on the completion of them, be admitted into the seminaries. A few years afterwards the bishops expressed a wish to have some private schools, in which youths designed for the priesthood might receive their classical education. These schools were established under the name of ecclesiastical secondary schools, or little seminaries, in contradistinction to the great seminaries, or theological schools. This *ordonnance* contained various clauses, the object of which was to prevent youths, not intended for the priesthood, from being admitted into the bishops' new schools. But the clergy, whose darling object it was to get into their own hands the education of the French youth, evaded the regulations of the *ordonnance* in every possible way. In a short time lay students were admitted into the little seminaries, and sometimes they were even more numerous than the ecclesiastical students. The clergy went so far as to establish, under the name of little seminaries, eight Jesuit colleges, which had scarcely any other than lay pupils. The ordinary schools pay a tax under the name of the university contribution; this tax is one-twentieth of the sum that each pupil pays to the *pension*; but the ecclesiastical schools

had been exempted, because it was supposed they would only admit ecclesiastical students. This privilege, as we have seen, they abused by receiving lay pupils, who would consequently enjoy exemption from the university-tax by an evasion of the law. The ordinary schools could not have maintained the competition; and instead of the university monopoly, there would have been a clerical monopoly, the tendency of which, we may conjecture, would not have been quite in conformity with the spirit of the charter. The government remedied these serious evils by the celebrated ordonnances of June 16th, 1828, which forbade individuals belonging to religious societies, not sanctioned in France, to keep schools; and also introduced fresh regulations to prevent the little seminaries from receiving lay pupils. The number of pupils in these establishments was limited to 20,000.

Hence it appears that 70,000 youths in France receive the secondary or classical instruction—50,000 being lay, and 20,000 ecclesiastic students.

Such is an exact statement of the present condition of the secondary instruction; but important modifications will follow from the new charter, and among them we may expect to see established, liberty of instruction. This important principle will be recognised as a part of public education, and will contribute to its improvement. As to the legislative enactments that will be made on this subject, we can only form conjectures; but some such as the following would be desirable. Those who form private schools might be required to give proof of their capability, without being otherwise restricted in the establishment of such schools. According to this plan, a person might become principal of an institution, master of a *pension*, director of a private college, just as a man becomes an advocate or physician; all he would have to do would be to give proof of his qualifications. Private schools should not be required to send their pupils to attend college classes; if they were exempted from this regulation, the masters would be enabled to arrange their studies in the way which they might think best, choosing the most expeditious methods, and adapting the education to the pupils' different destinations in life. Thus instruction might be rescued from the college routine and antiquated modes; and it would, like other arts, improve by being freed from restrictions. The government and communes would still have their schools, but a wholesome emulation would be excited between them and private schools founded by individual enterprise. Private schools should not be exempted from inspection. Authorized agents should have the privilege of visiting them, whenever they might deem it necessary, not for the purpose of fettering the master in his plans and methods of instruction, but to ascertain that the morals, discipline, and health of the pupils are not neglected.

We come now to speak of the *superior* instruction, which in France is given in schools called faculties. There are five kinds of faculties; theology, law, medicine, sciences, and letters. The principal object of studies in the faculties, is the obtaining of degrees.

In each faculty there are three degrees, those of bachelor, licentiate, and doctor. These degrees are obtained in succession, after examinations and *public acts or theses*. As we have already remarked, a student cannot obtain a degree in theology, law, or science, without being a bachelor in letters.

There are in France six faculties of Catholic theology; at Paris, Lyon, Aix, Bordeaux, Rouen, and Toulouse. At Aix, Bordeaux, and Rouen, they teach dogmatic theology (*le dogme*), morality of the gospel (*la morale évangélique*), history, and ecclesiastical discipline. At Lyons and Toulouse there is also a chair of Hebrew. The faculty of Paris has two chairs more than those of Lyon and Toulouse; one of sacred literature, and another of pulpit eloquence. The faculties of Catholic theology have very few students, and it is very unusual for a person to take degrees in them. The canons received in France had made degrees necessary for the higher ecclesiastical functions; but these canons, the utility of which was so apparent, though not abrogated, have fallen into disuse. For example, a person cannot be made a bishop without being a licentiate in theology, yet scarcely a single prelate who has been chosen for several years past has obtained this degree. The Court of Rome, however, it appears, considers the ancient rule as existing in principle, as the bulls which it gives to ecclesiastics named to a bishopric by the king, generally contain a dispensation from the degree of licentiate. The Catholic clergy of France appear to dread publicity in their instruction and examinations. This disposition may be attributed to that ultramontane tendency, in accordance with which they choose rather to conceal their theological instruction within the walls of their seminaries than to lay it open to the public. This much is certain, that whenever the government has wished to supply vacancies in the chairs of the theological faculties by the method of *concours*, this wish has been opposed by the bishops in every possible way. Perhaps the clergy would be glad to see these faculties suppressed, but it is rather the duty of the government to maintain them, and to render their instruction real and effectual. To accomplish this, it would be necessary to put in force the laws that required degrees as a qualification for the higher ecclesiastical functions, which would be one of the surest ways of opposing *ultramontanisme*, since publicity is the natural foe to all that is false and dangerous. If this salutary measure were adopted, the clergy would soon see that it is their interest and duty to recur to the real principles of the Gallican Church, by which means they would quickly recover that confidence of the people which it is so desirable that they should possess*.

There are two faculties of Protestant theology; one at Strasbourg, for the confession of Augsbourg; the other at Montauban, for the Helvetic confession. In these faculties they teach dogmatics, the gospel morality, Hebrew, ecclesiastical history, sacred eloquence, philosophy, and *exegesis*. The courses are well attended.

* The wish that is here expressed has been effected by a recent ordonnance.

The faculties of law are nine in number; at Paris, Aix, Caen, Dijon, Grenoble, Poitiers, Rouen, Strasbourg, and Toulouse. In all these schools they teach the institutes of Justinian, the civil code, and method of judicial proceedings. There are in some schools also a chair of the commercial code, of *droit administratif*, and of the Pandects. At Paris all these chairs exist; and there are, besides, chairs of the history of law and of national law. These two chairs, and that of *droit administratif*, were established in 1819; but, three years afterwards, a jealous power, which dreaded every thing however remotely connected with politics, declared them to be suppressed. In 1828-29 they were re-established. To obtain the degree of bachelor a person must attend a faculty of law for two years; in one year more the degree of licentiate is obtained; and in another year that of doctor. The students enter for three-month courses, and their attendance is ascertained by calling over the names. If they have not attended the proper number of courses, and if they cannot produce certificates of diligence, they are not admitted to the examinations and theses. The degree of licentiate is indispensable to enable a person to practise as an advocate or to fill a judicial situation. The degree of doctor is only required for those who intend to be professors, and, consequently, most students are satisfied with the degree of licentiate.

In France there are two classes of persons who practise the healing art; doctors either in medicine or surgery, and *officiers de santé*. To be admitted doctor in medicine or surgery, a person must have studied four years in a faculty of medicine, and must have undergone five examinations, and written one thesis. The first examination is on anatomy and physiology; the second on pathology and nosology; the third on *materia medica*, chemistry, and pharmacy; the fourth on *hygiène* and medical jurisprudence; the fifth on medical *clinique*, for those who are candidates for the degree of doctor in medicine, and on surgical *clinique* for those who are candidates for the degree of doctor in surgery. Thus the four first examinations are common to medicine and surgery; it is only the fifth which is varied according as the candidate is intending to practise surgery or medicine. The time of study is determined, as in the faculties of law, by three-month courses. There are three faculties of medicine in France; at Paris, Montpellier, and Strasbourg. The faculty of Paris has chairs of anatomy and physiology, medical chemistry, *physique médicale*, medical natural history, pharmacy, *hygiène*, surgical pathology, medical pathology, operations and bandages, therapeutics and *materia medica*, medical jurisprudence, midwifery, diseases incident to parturition and to newly-born children, medical *clinique*, surgical *clinique*, obstetric *clinique*. The two other faculties have the greater number of the chairs here enumerated, but some are wanting. For example, at Montpellier there are no chairs of *physique médicale* nor of medical natural history.

To become *officier de santé* it is not necessary to have studied in a faculty; it is sufficient qualification to have been examined by a

medical jury. There are medical juries in the principal town of every department, which assemble at a fixed time of the year. The juries are composed of two doctors established in the department, and a commissioner chosen from the professors of the faculties of medicine. The qualifications required from candidates for examination are—to have been a doctor's pupil for six years, or to have attended hospital practice during five successive years, or to have studied for three years either in a faculty of medicine or in a secondary school of medicine. The secondary schools of medicine are eighteen, established in the principal towns ; Amiens, Angers, Arras, Besançon, Bordeaux, Caen, Clermont, Dijon, Grenoble, Lyon, Marseilles, Nancy, Nantes, Poitiers, Rheims, Rouen, and Toulouse. The *officiers de santé* can only practise in the department in which they have been examined ; and they cannot perform difficult surgical operations in places where there is a doctor, except under his superintendence and inspection. The incompetence of a great number of *officiers de santé*, and the great facility with which this title is obtained, have long been the subject of complaints, which it is to be hoped the legislature will remove by new regulations. A few years ago a draft of a law affecting the secondary schools of medicine was presented to the Chambers, but it was not adopted. It is of urgent necessity that the abuses of this system should be remedied.

There are schools of *pharmacy* at Paris, Strasbourg, and Montpellier.

The faculties of sciences are seven ; at Paris, Caen, Dijon, Grenoble, Montpellier, Strasbourg, and Toulouse. In all these schools there are chairs of mathematics, natural history, physics, and chemistry. Toulouse has also a chair of the application of mathematics ; and Montpellier has chairs of astronomy, mineralogy, and zoology. At Paris the number of chairs is much greater. There are professors of the differential and integral calculus, of the higher parts of algebra, descriptive geometry, physical astronomy, mechanics, physics, chemistry, mineralogy, botany, vegetable physiology, and zoology. The faculty of sciences of Paris can reckon among its illustrious names such men as Thénard, Biot, Poisson, Gay-Lussac, and other European names.

There are in France six faculties of letters ; at Paris, Besançon, Caen, Dijon, Strasbourg, and Toulouse. The two last-mentioned faculties have chairs of history, Latin literature, Greek, French literature, and philosophy. Besançon and Caen have one or two chairs fewer. The faculty of Paris has eleven chairs ; Greek literature, Latin eloquence, Latin poetry, French eloquence, literary history and French poetry, philosophy, history of ancient philosophy, history of modern philosophy, ancient history, modern history, and geography. Of this celebrated school Villemain, Cousin, and Guizot, are the greatest ornaments. A general wish has been expressed to see established in the faculties of letters, and especially in that of Paris, chairs of foreign literature ; for in proportion as the communication among nations increases, we feel more strongly

the wish to compare with our own literature, the poetry and eloquence which mark the character of other nations. A recent ordonance has formed such a chair in the capital.

The only degree conferred by the faculties of sciences and letters which requires as a qualification a certificate that the preliminary studies have been gone through, is that of *bachelier-ès-lettres*. The candidate for this degree must prove that he has gone through a course of philosophy in a college or other establishment *de plein exercice*. Youths brought up at home are the only persons who are exempted from this regulation. The examination for the *bacca-lauréat-ès-lettres* is, in general, not very strict; but that for the other degrees of the faculty of letters, and for those in the faculty of sciences, are much more so. These latter degrees, however, are of no use except to those who wish to become professors. It may be asked what effect will be produced on the superior education by the principle of liberty of instruction? Most probably the law will maintain the various faculties, and the present regulations with respect to the requiring of degrees, as a qualification for following various professions, while those who at present have the title of professors will have the superintendence of the examinations and the theses. But we may expect that in France, as in most of the German universities, every person who has obtained the degree of doctor will be allowed to open a public class, and that the students will have the privilege of choosing between the courses of such teachers and those who have the title of professors; and, further, that the diligent attendance of the pupils on such classes will be taken into account as necessary to prove the fact of their having studied the length of time prescribed by law. And, lastly, we may expect that all professorships will only be conferred by the method of the *concours*; and as this will take place between candidates accustomed to teach publicly, they will certainly be more brilliant than they are at present.

We must add to the schools of superior instruction, the College of France, the Museum of Natural History of the Jardin du Roi, the School of Living Oriental Languages in the Royal Library, and the Special School of the Fine Arts.

The Polytechnique and Normal Schools are also institutions for superior instruction: the first mentioned is well known through Europe; the second is designed to form professors for the royal and communal colleges. It was established in 1812, and soon produced striking effects by sending forth a number of excellent professors; it served as a kind of nursery for the colleges, which, under its influence, were constantly improving. In 1821 the Normal School was suddenly suppressed, under the pretext of what was called the disaffection (*mauvais esprit*) of the pupils. This *mauvais esprit*, we may readily conjecture, was nothing else but the love of those institutions sanctioned by the charter. How is it possible to study with ardour history and philosophy, to store the mind with the finest productions of ancient and modern literature, and to ascend to the principles of the beautiful in every object of inquiry, without

loving liberty? It was an unavoidable crime, that on which they grounded the sentence pronounced against the Normal School. The *theoretical* party urged the destruction of this institution with all their power, considering that the readiest means of destroying all public instruction, with the view of benefiting the ecclesiastical establishments, was by overthrowing the colleges; and the surest way of effecting this, was to ruin that institution which was designed to secure a regular supply of professors. A few years after an establishment of the same nature as the Normal School was established under the title of Preparatory School, but it was formed on a much reduced scale, and its regulations framed under the influence of the most absurd fears. The Ministry of 1828 designed to re-establish the Normal School under its former name, and with the old organization; but this failed to be accomplished, and the proscription of the school still continued in force. Since the events of July, 1830, the Preparatory School has taken the name of Normal School,—a circumstance which makes our hopes revive. We cannot doubt that this school will be extended and enlarged consistently with the importance of its object, and a legal enactment to this effect is eagerly looked for. At present the pupils are received after competition and examination. The school has two divisions, one of science and one of letters: the total number of pupils is fifty. After three years of study they are placed as *regents*, that is, as professors, in the communal colleges. After this period of studies they are also admitted to the *concours de l'agrégation*. The object of this *concours* is to furnish professors for the royal colleges, and the private colleges of St. Barbe and St. Stanislaus. The pupils of the Normal School, the regents of the colleges, and the masters of studies (*maîtres d'études*) in the royal colleges, are admitted to the *concours de l'agrégation*. It is determined beforehand how many titles of *agrégé* shall be conferred after the contest. The candidates who distinguish themselves most in the different examinations of the *concours* receive the titles. They are then placed in the royal colleges as soon as there are vacant chairs. Much has been written and said against this system of making *agrégés*, but experience appears to be in its favour. It has generally produced good professors. But this is not its only advantage: it maintains among the pupils of the Normal School, the regents of the communal colleges, and the masters of studies in the royal colleges, an emulation, without which one might fear that their zeal would slacken and their efforts be relaxed. The system of *agrégation* tends to raise the character of the general body of teachers.

Besides these schools of which we have been speaking, there are in France various special schools, of which we ought to give some short account. These are:—

1. The *écoles des arts et métiers*, at Châlons and Angers. The special object of these establishments is to educate persons who shall combine with a practical knowledge of the mechanical arts all the theoretical instruction necessary to enable them to perform their mechanical occupations in a skilful manner. The pupils are

appointed by the Minister of the Interior, and are 600 in number ; 400 at Châlons, and 200 at Angers ; 450 of these pupils are maintained entirely or in part by the State. Three appointments are assigned to each department, one at half allowance, a second at three quarters of a full allowance, and a third with a complete allowance. Eight appointments are given to the Society for the Encouragement of National Industry ; six with full allowances, and two with three quarters of a full allowance. The nominations to these appointments assigned to each department are made on the recommendation or presentation (*présentation*) of the préfet. There are, besides, boarders (*pensionnaires*), who pay 500 francs per annum. The theoretical instruction comprises writing, arithmetic, French grammar, the elements of geometry and trigonometry, descriptive geometry with its application to the planning of carpenter's work and machinery, the principal facts of the physico-chemical sciences applied to the various branches of industry, and the exhibition of experiments on the strength and resistance of different materials used in buildings. The manual labours are limited to the occupations of the wheelwright, carpenter, joiner, smith, *limeur et ajusteur*, turner of wood, turner of metals, moulder, iron and copper founders.

The course of study ordinarily comprises four years ; but the pupils who particularly distinguish themselves may obtain permission to remain a year longer to complete their education. At the end of the fifth year the most skilful of these pupils may be sent into the principal manufactories of the kingdom, and stay there a year at the expense of the State. The number of those to whom this advantage is granted cannot exceed ten.

2. The *Conservatoire des Arts et Métiers* at Paris. In this establishment there are public courses of mechanics and chemistry applied to the various branches of industry, of physics, industrial economy (*économie industrielle*), of descriptive geometry, and drawing. Those who have resided at Paris know that the *Conservatoire* contains a valuable collection of models of machinery of all kinds. A council *de perfectionnement*, attached to the *Conservatoire*, and composed of scientific men and manufacturers, give their opinion on everything which they consider to affect the preservation or the improvement of the *Conservatoire* and the school of arts and trades.

3. The Free School for Mathematics, and for Drawing applicable to the mechanical arts, established at Paris, in the street of the School of Medicine. In this school are taught practical geometry, arithmetic, mensuration, and land-surveying ; the cutting of stone and wood ; the elements of architecture ; the drawing of the human figure, animals, and flowers. There is also a free school of drawing for young persons. A great number of towns in the departments possess similar establishments.

4. The Special School of the Fine Arts, established at Paris, in the street *des petits Augustins*. This school is divided into two sections, one comprehending painting and sculpture, the other archi-

ture. Distinguished artists, whose talents confer honour on France, are professors in this school. Besides this, the state supports schools of painting at Lyon and Dijon; others are supported by the towns. From among the latter class we may mention that of Valenciennes, which has produced very distinguished pupils, of whom three have gained the first great prize at Rome.

5. The French School of the Fine Arts at Rome.

6. The Royal School of Singing and Declamation, in the street of the *Faubourg Poissonnière*, at Paris.

7. The Veterinary Schools of Alfort, Lyon, and Toulouse. Up to 1825, there was at Alfort a chair of rural economy, which we may hope to see re-established. The training and breeding of the horse are taught in these three schools, having formerly been taught in the *manège* of Strasbourg.

8. The schools designed to form proper persons for other public employments, such as the military school of St. Cyr; the school of cavalry of Saumur; the school for forming staff-officers; the school of *ingénieurs géographes*; the school of artillery and of military engineering at Metz; the school of bridges and roads; the school of mining; the school of forests (*école forestière*) at Nancy; the school for naval engineering at Brest. To be admitted into the school of geographical engineers, of engineering and artillery, of roads and bridges, of naval engineering and mining, it is necessary to have been a pupil of the Polytechnic school. There are, however, in the school of mines, besides the engineer pupils, other pupils (*élèves externes*) who receive gratuitous instruction. The latter cannot form part of the corps of engineers of the mines, but the knowledge which they acquire enables them to direct the working of mines. Thus this school, while it supplies the public service, aids in cherishing private industry. There is also a practical school of mining at St. Etienne.

Besides the school designed to form officers for the marines, there are schools of hydrography for the merchant marine in nearly all the ports of the kingdom.

There are in France two principal schools of agriculture; one at Roville, the other at the experimental farm of Grignon: in these schools the instruction is both theoretical and practical. The theoretical instruction consists of courses on agriculture, and the related sciences. The school of Roville, directed by M. Mathieu de Dombasle, is a private undertaking, which has formed skilful pupils, and contributes essentially towards diffusing in France good modes of cultivation, which in this country are not yet sufficiently known and followed. These schools of agriculture are not the only ones in France. We may add to them (1.) The preparatory school of agriculture, founded at Paris by M. Blancq, formerly pupil of the Polytechnic school. The name of the professor appears a sufficient guarantee for its success. (2.) Three pattern farms; one at Veneuil (Maine and Loire), the other at Grandjouan near Nantes, the third near Toulouse. (4.) Another experimental farm in the department of Aix, directed by the agricultural society of this depart-

ment. (5.) Schools of horticulture. We must comprise in this list, the course on cultivation, established by Thouin, at the Museum of Natural History at Paris; the courses on botany applied, and on the general cultivation in botanical gardens, on pharmacy, on agriculture, &c. Such courses are given also in a considerable number of towns; for example, at Strasbourg, Lyon, Dijon, Montpellier, Toulouse, Brest, Lorient, Rochefort, Marseilles, Toulon. Lastly, the horticultural institution, established by M. Soulange Bodin, on his beautiful domain of Fromont, is an excellent school, that merits particular notice.

There are at Paris several commercial schools, undertaken by private individuals. Among others, we may mention the *Lycée Commerciael et Industriel*, situated in the Passage Saulnier. This establishment is well managed, the course of studies is good, the number of pupils progressively increases, and it deserves our best wishes for its further prosperity.

Lastly, there is an institution which seems designed to render the greatest service to industry—we mean the Central School of Arts and Manufactures of Paris (*école centrale des arts et manufactures*), in the street Thorigny: this school is intended to form civil engineers, superintendents of machinery used in manufactures (*directeurs d'usines*), heads of manufacturing establishments, and professors of the application of the sciences. The school has been founded by some distinguished men of science, who possess also practical knowledge. It would require a very minute detail to explain the whole organization of this school, and the instruction given in it *. We may, however, state, that this school has no boarders; that pupils are only admitted after an examination in which they must prove their acquaintance with arithmetic and the elements of algebra and geometry. The course comprehends three years. In the first, the pupils learn descriptive geometry, mechanics, general physics, and general chemistry; in the second, descriptive geometry applied, the construction of machines, the physical theory of steam-engines, physics and chemistry applied to practical objects (*physique et chimie industrielle*), civil and commercial architecture, natural history, the anatomy and physiology of man, mineralogy, geology; in the third, the construction of machines and their *specification*, chemistry applied to *practice or commerce*, architecture and public works, the working of mines, natural history applied to practical purposes, the statistics of the industrious classes, and the state of health of such classes (*statistique industrielle et hygiène industrielle*). The expense for each pupil is about six hundred francs per annum. This private establishment, formed on a vast scale, is in the highest degree worthy of attention and encouragement.

Such are the means which France presents for public education; and considerable as they are, we believe that, if better managed and better combined, they would produce still greater results. The first thing that is wanting, is a law, by which all the schools maintained by the state (except perhaps those purely military) might be placed

* See *Journal of Education*, vol. i, p. 399.

under the direction of a single minister; and this, we believe, would produce more unity and harmony in this department of the public administration. The majority of these schools are now under the care of the minister of public instruction, while some are under the minister of the interior. This separation is injurious, and founded on no sufficient reason. There is no reason why a single department of the administration should not comprise everything that relates to public education, to the academies, the arts, and, in a word, all the *moral* power of society.

SECOND QUESTION.—*What is the general character of the education in France in the schools and colleges? and what is the relationship between the colleges and the universities?*

The first part of this question has been already answered. In the answer to the third and sixth questions further particulars are given. The second part of this question is answered under the head of the fourth question.

THIRD QUESTION.—*What measures have been taken for the education of the peasantry, and mechanics or artisans?*

Very little that is satisfactory can be said on this head. The education here referred to is that called the *primary* or *elementary* (see the answer to Question I.), for which the government has hitherto done very little; almost everything still remains to be done. It may be asserted that the primary instruction will never be effective till the following regulations are in force:—(1.) There should be formed a sufficient number of schools to educate masters in. (2.) The primary instruction should be gratuitous for all indigent families. (3.) Instructors, when old or infirm, should have some allowance secured. (4.) There should be examinations for the purpose of ascertaining the qualifications of masters, and some kind of inspection as a check on their conduct; but care should also be taken that such examination and inspection should not become vexatious and injurious. (5.) The best methods of instruction should be encouraged. (6.) To the knowledge of reading, writing, and arithmetic, should be added instruction in those branches which are necessary to form intelligent and skilful workmen. (7.) The government should cause books to be written and circulated which are adapted to the comprehension of the pupils in the primary schools; such books as would tend to form the reasoning powers, to impress on their minds religious principles free from all fanaticism and superstition, to inspire them with sentiments of honour, humanity, patriotism, and submission to the laws, to give them useful ideas suitable to their condition in social life, and, in fine, to remove those dangerous prejudices under which the lower classes still labour. We shall now show how far this has hitherto been accomplished.

The schools designed for forming masters, under the title of primary normal schools, are very few in number: some were established by the administration of 1828. The government had but very

limited funds at its disposal to meet the expenses of these schools ; and accordingly the minister of public instruction applied to the councils-general of the departments to assist him. Only four or five of these councils answered his application ; the rest refusing, in terms which clearly showed how little interest they took in the progress of primary instruction. It is well known what kind of men these councils consisted of at that period, and to what an extent the influence of the *theocratic* party and the absolutists prevailed. The few primary normal schools which have been established have produced the happiest results, having already sent out excellent masters. The present government is zealously engaged in extending this useful branch of education.

The law of September 14, 1791, enacted that there should be organized a system of public instruction for all the people, which should be gratuitous with respect to those kinds of knowledge which are indispensable for all classes. Unfortunately, this law has never been carried into effect. The law of 11th Floreal, the year 10, determined that the primary schools should be established by the communes ; and it also determined, that the payment to the teachers should consist (1.) of lodgings furnished by the communes ; (2.) of fees paid by the parents, the amount to be fixed by the municipal councils. The municipal councils were to have the power of exempting from payment those who were unable to pay, provided the number of pupils exempted should not exceed one-fifth of the children received into the primary schools. We may observe how confined and illiberal this system was, compared with that which the law of 1791 had contemplated. The ordonnance of April, 1816, had for its object the re-establishment of the system laid down by the law of 1791 : it declared, that 'every commune should be bound to provide primary instruction for all the children of the commune, giving this instruction gratuitously to indigent children.' But the means of carrying this into effect have always been wanting, the majority of the communes being unable to provide a salary for a primary instructor. It would seem indispensable, then, that the state, or the departments, should form a common fund to supply the salaries, or some part of the salaries, of the teachers in the poorest communes. A law on this subject is of urgent necessity.

When all the masters are suitably paid, it will be easy to form a pension fund for those who become old and infirm, by making a certain deduction from their salaries. Various attempts have been made to form a fund of this kind ; but a solid basis has been wanting to build it upon, since most teachers have no fixed and determinate salary.

Persons who wish to become primary instructors must fulfil two conditions. In the first place, they must obtain from the rector of the academy a certificate of competency (*brevet de capacité*). This certificate only determines the fact of competency, without conferring on them the power to teach in any determinate place. There are three degrees of certificates of competency : those of the inferior degree are given to persons who can read, write, and cipher ; those of the second,

to teachers who can write a good hand, and are acquainted with orthography and arithmetic ; the certificates of the first degree are given to teachers who are acquainted with the principles of French grammar and arithmetic, and are competent to give some instruction in geography, land-surveying, and other branches of knowledge useful in primary instruction. This gradation of certificates tends to introduce emulation into the profession of primary instructors. Every teacher, both of the lowest and second degree, strives to acquire the knowledge which is necessary to raise him to a higher rank than that which he occupies : experience has proved this. The rector, before giving the certificate of competency, either examines the candidate himself, or by a deputy. It is to be wished that there was at least one deputy of this kind in each arrondissement, to save candidates a long and expensive journey. The ordonnance of April 21, 1828, requires from Catholic candidates a certificate of their religious instruction, signed by a delegate of the bishop of the diocese. This regulation should be speedily abolished, because it makes the primary instruction depend on the clergy, who are far from being desirous to see it extended.

As we have already remarked, the person who obtains a certificate of competency, does not obtain by that alone the privilege of acting as a primary teacher ; he must, in addition to that, obtain permission to teach in a determinate place. This permission is granted by the rector of the academy, on the recommendation of the committee that has the superintendence over primary instruction in the district in which the teacher wishes to establish himself. There is a committee in each canton, composed of the mayor, magistrate (*juge de paix*), and the *curé* of the chief place in the canton (all these being *ex officio* members), and also of a certain number of the chief inhabitants chosen by the rector. In the chief towns of the *arrondissement*, the sub-prefect and the *procureur du roi* may attend the committees. The mayor presides, except when the sub-prefect or the *procureur du roi* attends, in which case the sub-prefect presides, or in his absence the *procureur du roi*. The committees of the cantons are not only charged with the duty of giving their opinion on the claims of the candidates, but it is also one of their most important functions to superintend and encourage the primary instruction. If there is any complaint against a primary instructor, the committee of the canton summon the teacher, examine him, make inquiry, and give their opinion, which is transmitted to the rector of the academy. The rector can deprive the teacher of the power of teaching, leaving him, however, an appeal to the minister of public instruction. If there is reason for depriving the teacher of his certificate of qualification also, the matter is submitted to the academic council, still leaving the teacher an appeal to the council of the university. (The terms rector, academic council, and council of the university, are explained in the answer to Question 4).

Such is the present condition of legislation with respect to the profession of a primary teacher, but the principle of freedom of

instruction must necessarily make some modifications in the system. The possession of a certificate of competency ought to be the only qualification required from a primary teacher. Instructors are divided into two classes; the communal teachers, who are maintained entirely or in part by the communes, and the free teachers, who receive nothing from the commune, and who are supported entirely by their teaching. The municipal councils ought to be empowered to choose communal teachers from among those individuals who have the certificate of competency; and every person who has this certificate ought to be allowed to settle himself wherever he pleases, as a free teacher, on condition simply of declaring himself at the mayor's office, and producing certificates of good character. Under such a system as this the committees of cantons would be useful. Their functions would consist, (1.) in superintending and encouraging primary instruction: (2.) in directing proceedings against masters when necessary, and giving their opinion in such cases. When the misconduct required it, the instructor, whether communal or free, might be deprived of his commission; the communal teacher might also be removed from the commune (still keeping his commission) on the requisition of the municipal council, when the reasons assigned by this council might appear to warrant such a measure. The academic council would pronounce sentence in the first case, and the rector in the second. It would be desirable to combine, if possible, the mode of forming the committees with the law on the municipal organization.

In France three methods of primary instruction are known; individual instruction, simultaneous instruction (*l'enseignement simultané*), practised by many teachers, and among others, the brothers of the Christian schools (*les frères des écoles chrétiennes*); and mutual instruction, on the Lancasterian method.

The first of these methods is essentially bad; the second is adapted for those rural communes that have a thin population. In all places populous enough to furnish a school of forty or fifty pupils, the method of mutual instruction is preferable to all others, because it is cheaper and more expeditious, and consequently can be extended to all classes of society. A school of the brothers of the Christian schools costs annually 1800 francs: a school of mutual instruction costs scarcely half this sum; and yet more pupils can be taught in the latter than in the former, the master being multiplied as it were by the aid of monitors. The mutual instruction was proscribed at the period when the *theocratic* party prevailed. An ordonnance of April 8th, 1824, had granted to the bishops the power of granting or revoking the commissions of the primary teachers. This *régime* continued till the *ordonnance* of April 21st, 1828, and during this period three-fourths of the schools of mutual instruction were closed. Since 1828 they have recovered, but slowly: great obstacles have arisen from the party spirit that prevailed among the local authorities; but at present we may hope that they will receive fresh encouragement both from the government and the municipal authorities.

It is important also, that in the less populous communes, individual instruction should give way to simultaneous instruction. The committees of the cantons might contribute materially towards producing this result. Experience has proved that periodical meetings of the teachers in the chief town of the canton, in presence of the committee, are well adapted to check bad customs, and cherish good ones. It is to be wished that this system, which has been in operation in some departments, should be generally introduced.

The schools in which, in addition to reading, writing, and arithmetic, instruction is given in those branches necessary to form skilful workmen, such as perspective drawing and geometry, are now tolerably numerous. The government and the communes grant them such encouragement as will doubtless increase their number.

There are also (as we have remarked in the answer to the first question), in most of the large towns, public courses of lectures on geometry and mechanics applied to the arts. Several towns have also courses of practical chemistry, which are attended by workmen of various professions and ages: the progress of those who attend, and the increasing skill of the artisan, are sufficient proofs that something effectual has resulted from these lectures.

The regiments of the army have schools of mutual instruction for the purpose of teaching the soldiers reading, writing, and arithmetic.

Good books are generally wanted in the primary schools of France. The insipidity and the absurdity of the greater part of those used are really disgusting. But for some time past great progress has been made in writing books adapted to the comprehension and condition of the children who frequent primary schools. These books consist of small elementary treatises on the different useful arts, and of short stories, which present good moral lessons in an ingenious and interesting form. Among works of this latter description, we may mention the delightful little books of M. Laurent de Jussieu, which however are not yet very extensively used in schools. The government appropriates some money for the purpose, and in 1828 proposed as a subject for a prize of 10,000 francs, the composition of a text book, adapted to the use of those who can read fluently. This proposal attracted much public attention, but it is not known what has been the result of it.

The sums annually granted to the minister of public instruction are far too small, though for some years they have been progressively increased. Three years ago they amounted only to 50,000 francs, but since that time they have been raised to 300,000. This sum is still manifestly too little; it would require several millions to accomplish what is desirable. No expenditure, both *morally* and *materially*, is so essential as this, in a country both free and industrious; and as the government no longer depends on force, fear, and prejudices, but on the general good sense and public feeling, it is indispensable that instruction should extend to all classes of society.

We shall take this opportunity of rendering just praise to several philanthropic societies that have actively encouraged primary instruction during the last fifteen years. We have seen them some-

times by their diligence making amends for the negligence of the government, sometimes struggling against its pernicious agency, and sometimes seconding the laudable intentions that the government has occasionally displayed. The society for elementary instruction established at Paris is that which has done most. Without its energetic perseverance and its generous aid, mutual instruction would have sunk under the persecution which for many years has been directed against it. Associations of the same nature were formed in a great number of other towns, which supported the schools of mutual instruction by raising private subscriptions. The society of Paris has constantly corresponded with these associations, and aided and encouraged them. We should not forget that the efforts of this society have at every period been seconded by a functionary, whose justice, independence, and intelligence, have left an honourable record in the capital. M. Comte de Chabrol has always been the zealous protector of primary instruction, and the indefatigable propagator of the Lancasterian method. His honourable conduct merited the higher praise, from the contrast which it exhibited to that of nearly all his colleagues. Political changes should not prevent us from paying to an honest man this tribute of justice and gratitude, which in his retirement perhaps he may hardly expect to receive.

FOURTH QUESTION.—*What is the general system of government in the colleges? The nature of the university superintendence? The mode of paying, controlling, and removing professors?*

This question contains several heads which must be answered separately.

I. The general management of colleges.

In this we must distinguish between royal and communal colleges. Every royal college has a head called *proviseur*; and also a *censeur des études*, whose business is to superintend, under the *proviseur*, the conduct, the morals, studies, and progress of the pupils. A responsible clerk (*agent*), called the *économie*, manages the receipts and expenditures. An officer entitled *aumônier* has the charge of the religious instruction. All the royal colleges admit both boarders and day scholars, except two, the college of Charlemagne, and the college Bourbon at Paris, which only receive day scholars.

The boarders are divided into *libres* and *boursiers*; the former class comprising those whose expenses are paid by their own family; the latter, those whose expenses are paid entirely, or in part, either by the state or the communes. The day scholars are those youths who either live with their parents, or are boarded in institutions or *pensions*, and attend the college classes. They pay to the college certain sums, known under the name of *rétribution collégiale*, which must not be confounded with the *rétribution universitaire*, described in the answer to the first question.

The college receipts consist (1.) of sums granted by the state to pay the fixed salaries of the *proviseur*, *censeur*, *aumônier*, the *économie*, and the professors: (2.) of the sums paid by the boarders, whether they be *libres*, or supported by the state or the communes:

(3.) of the *rétribution collégiale* paid by the day scholars: (4.) of income from funded property, and other property belonging to the colleges.

The expenses consist (1.) of the fixed salaries paid to the above mentioned functionaries: (2.) of the variable payment (*traitement éventuel*), and the supplemental allowance made to a functionary. The *traitement éventuel* arises from a certain share in the money paid for board, and a certain share in the sum paid by day scholars. The supplemental allowance comes out of the *boni* of the college, a term by which is meant the excess of receipts above expenditures. If there are no *boni*, the supplemental allowance is furnished by the general funds of the university: (3.) the salary for the *maîtres d'études*: (4.) the maintenance of the pupils: (5.) the fixed salary of some professors who receive none from the state; for example, professors of history in most of the departmental colleges, professors of natural history, and of modern languages: (6.) of small expenses of various kinds, such as for the purchase and repair of philosophical instruments, books, &c. &c.; small repairs of the building, &c. The establishments are furnished, and the great repairs are paid by the towns in which the royal colleges are situated.

The *boni* of the colleges, deducting the sum charged on them as above described, are employed in making purchases in the funds. Several of these establishments have funded property to a considerable amount. The colleges can receive donations and legacies, sell, purchase, &c., with the authority of the government. Their financial concerns are distinct from, and independent of, those of the university, and also those of the public treasury.

The communal colleges are maintained by the communes. The financial management is not the same in all. In general, the boarding department is the sole concern of the principal of the college; and the town levies on each day boarder a sum which goes to pay part of the salary of those professors who, in the language of the university, are called regents. The remainder of the sum which is necessary for this purpose is paid out of the communal income. The town supplies the building and keeps it in repair.

II. Superintendence of the university.

The *university*, in France, is the whole of the body of teachers. There are in the university two classes of functionaries; one consisting of teachers; the other of those who have the management and superintendence. The latter class comprehends the minister of public instruction, the councillors of the university, the inspectors-general, the rectors and the inspectors of the academies.

The minister of public instruction discharges all the duties which the constitution of the university has entrusted to the grand master of the university. In everything which is purely administrative he decides on his own responsibility, after having taken the opinion of the council of the university. He exercises also a disciplinarian power in cases of smaller importance: but he cannot dismiss or erase from the list the members of the university; that is, he cannot deprive them of their place. Such a punishment can only be in-

flicted by the council of the university, which then decides like a real tribunal.

As we have just seen, the council of the university discharges two kinds of functions: as to matters of administration, it is an advising body; in affairs of discipline, it pronounces judgment. As a tribunal, it has cognizance also of matters which belong to university jurisdiction, always leaving an appeal to the council of state. The same appeal is also allowed in affairs of discipline, but only when the sentence is that of deprivation. This punishment is of a nature altogether peculiar: the member of the university who has incurred it, is not only excluded from the body of teachers, but likewise declared incapable of discharging any other public function. The sentences of the university which impose the punishment of deprivation, are read at the public audiences of the royal court. In general, everything which belongs to the jurisdiction and penal powers of the university is regulated at present in a manner not at all satisfactory. A law on this subject is indispensable.

Some think that the best measure would be to extend the institution of jury to cases of university discipline, the jurymen being chosen from among the members of the university.

The councillors of the university are named for life. It is an important question to decide, if the perpetuity of their functions is advantageous, or if it would not be better that they should be chosen at stated intervals from among the professors of the faculties. Every permanent body becomes a stationary one: a council which is changed at certain periods, is more likely to follow the progress of improvement and of public opinion.

It is the duty of the inspectors-general to make the circuit of the various academies. They visit the faculties, royal colleges, and some other university establishments. The office of inspectors-general has often been attacked on the ground of being useless; but we are of a different opinion. It is by the reports of the inspectors-general that the central administration discovers a crowd of abuses, which otherwise would never have come to its knowledge.

The territory of France is divided into twenty-seven academic districts, which is also the number of royal courts. Every academy has a head called a rector, who is aided in his functions by inspectors of the academy. The inspectors are generally two in number for each academy; at Strasbourg and Rennes there are three, and at Paris eight. The rectors and inspectors of the academy superintend establishments for education, both superior and secondary, comprehending in this list both institutions and *pensions*, that is, places of instruction kept by private persons. They visit these places, examine the pupils to ascertain their progress, and inquire into everything which concerns the discipline and morals. They make circuits also through the principal primary schools. Each academy has an academic council, consisting of the rector, inspectors, and a certain number of other members appointed by the minister of public instruction, and taken as well from the members of the university as from the principal persons of the country.

Their services are given gratuitously. The academic council deliberate on the principal questions of administration which arise within the limits of the academic jurisdiction ; and they also prepare all necessary proceedings, *in matters of discipline, against members of the university*. Such cases, as we have already remarked, are decided by the council of the university. In fact, the academic council decides, in certain instances, on matters of discipline relating to students in the faculties ; in other instances, they confine themselves to bringing such cases before the university council, by whom judgment is pronounced.

III. Mode of paying, controlling, and removing professors.

The mode of paying professors in the royal colleges, and regents in the communal colleges, has been already described. The professors of the faculties receive from the university a fixed salary, and they have besides, a contingent sum (*traitement éventuel*), which arises from the fees for examinations, and the pupils' theses. It appears from this, that there is a difference between the mode of paying the fixed salary of the professors of the royal colleges, and the fixed salary of the professors of the faculties. The former are paid out of the public treasury ; the latter out of the special funds of the university. These special funds, which are also charged with the salaries of the ministerial officers of the university, consist of funded property belonging to the university, of the university-fee or tax (*retribution universitaire*), the sums paid by the pupils of the faculties, and some other branches of revenue of less importance ; but this distinction between the funds of the university, and those furnished by the common treasury, can interest foreigners but very little. Perhaps it would be desirable that the *teaching body* should have a sufficient endowment or allowance to secure all parts of the system ; but that its budget and necessary sums should be voted by the chambers. In this way might be united the advantages of independence and legislative control. Others think that the *teaching body* should have no endowment or grant ; and that grants for particular purposes tend to introduce abuses into the financial system. The question is one of difficulty.

As to the control over the professors, it consists in the superintendence of the university, and in the proceedings which may be instituted against them. We have already remarked that no professor can be dismissed without a judgment. The professors of the royal colleges, and the regents of the communal colleges, may be removed, without their consent, from one college to another. An order of the minister (of instruction) is sufficient for this ; but the minister cannot make such an order, without taking the opinion of three members of the university council. It is the common opinion that a professor of a faculty cannot, without his consent, and without a judgment pronounced, be removed to another place.

FIFTH QUESTION.—*What are the principal branches of knowledge taught in the colleges? Of what nature are the examinations, rewards, and punishments, of students?*

In the answer to the first question we have mentioned the principal branches of knowledge taught in the colleges ; but some more circumstantial details may be useful. To give a clearer idea of the whole, we will suppose that a boy of nine years of age enters a college, being able to read and write correctly, and having an acquaintance with the elements of French grammar ; and we will follow him through his course of study, considering that we are speaking of a youth of average capacity. Such a boy as we are speaking of, passes two years in the classes called elementary, in which he learns Latin grammar and geography. He is exercised in translating the easiest Latin authors, and in making themes. At the age of eleven, he enters what are called the grammar classes, which are the sixth, fifth, and fourth. The pupil passes through one each year. He continues to study Latin, begins Latin prosody, and makes Latin verses. He also begins the Greek grammar. In the fourth class he reads Xenophon ; in the fifth he begins to study history.

At fourteen the pupil passes into what are called the humanity classes, which are the third and second. In the third he reads Virgil, Cicero, Sallust, Homer, Plutarch, and other Latin and Greek authors, which present about the same degree of difficulty with those just mentioned. He continues to make translations, themes, and Latin verses : in some colleges Greek themes also are made. In the same class lessons in natural history are given. In the second he composes Latin exercises on a given subject, which is a step towards the compositions of the rhetoric class. He also reads Latin and Greek authors of greater difficulty than those which occupy the third class. The study of mathematics is commenced. Except these differences, the studies in the second are the same as in the third. In these two classes he continues to study history.

At the age of sixteen the student begins rhetoric ; he writes original essays in Latin and French, makes Latin translations, Latin verses, and Greek translations. In this class the student reads Sophocles, Demosthenes, and the most difficult Latin authors. He terminates his historical studies, and continues the mathematics. The student has the choice of either staying one year in the rhetoric class, or going over the studies of this class a second time, which is called doubling.

From the rhetoric class the pupil passes to that of philosophy. The study of philosophy comprehends logic, metaphysics, and morals. The professor explains to his pupils the principles of these different sciences, puts questions to them, and exercises them in the composition of philosophical disquisitions. A few years ago the philosophical lectures were delivered in Latin, which tended to limit the study of the science ; but by the ordonnance of 1829 they must be given in French. The students in philosophy continue at the same time the mathematics, and attend a course of elementary physics. After a year's study of philosophy, the pupil is admissible to the examination for the *baccalauréat-ès-lettres*, and if he has profited by his studies, he is fully competent to get through his exami-

nation. Youths who are intended for the Polytechnic school, or for the normal section of the sciences, or in general are designed for a scientific career, stay at college a year longer, and attend a course of mathematics called *special*, and a course of the physical sciences. Thus the youth who enters college at nine years of age will finish his studies at eighteen, if he wishes to obtain the degree of *bachelier-ès-lettres*; and at nineteen, if he intends to enter the Polytechnic school, or to follow any scientific pursuit.

Such are the college studies, which, indeed, are far from being faultless. Too much time is devoted to Latin, it being evident that with better methods, that language would be learned quite as well in a shorter time. In 1828 the minister of public instruction formed a commission to inquire into the different modes of teaching Latin and Greek in places of public instruction, and to determine in what respect such methods might be improved. We do not know what were the results of this inquiry; but there are improvements of a nature so obvious as to strike every one. Thus, as an instance, we may remark that the elementary classes of the colleges are too numerous, some of them containing as many as sixty pupils: they should be reduced to twenty. Boys who are commencing the study of the ancient languages require frequent attention from the master; and instead of two lessons per day—one in the morning, and the other in the afternoon, there should be three. The youngest pupils lose time in the rooms where they prepare their lessons; while, in the class-room, their attention is engaged, and their minds exercised. The boys also write too much. Up to the fifth class the instruction should be almost altogether oral. To translate the authors, and then to retranslate into Latin the French version of those passages which they had read a few days before, is the surest and the least disagreeable way of making them familiar with the grammatical forms of the Latin language. At present there is no emulation among the pupils but on the day when they write composition, in order to determine their places. By means of oral instruction, on the contrary, it is easy to form a system of continual emulation. When a pupil hesitates, or is mistaken, we might call on any other pupil to answer who feels confident that he can do better. By such, and similar methods, it is possible to keep youths in constant activity, and turn every moment to account.

Some methods of this kind are successfully followed in various private establishments; and one is surprised at the apathy of the university, that takes so little pains to introduce them into the colleges. Liberty of instruction we may expect to bring with it improvements, in this as well as other particulars: if a certain number of private places of instruction set the example, those of the government will be compelled to follow. If we can succeed in shortening the time spent on the ancient languages, the time gained might be employed on the modern languages, which are very much neglected in the colleges. The pupils can only acquire them by study during the play-hours; and, in this respect, they are put on the same footing as ordinary accomplishments. It is true that an ordonnance of

1828 decreed that modern languages should necessarily form a part of the college studies ; but hitherto this regulation has not been fairly and completely put in force.

All that has been said only refers to classical studies ; but, as we have already remarked, there are, besides this, in certain colleges particular classes of pupils, who attend courses adapted to prepare them for commerce, and other occupations of that kind. On this department it is unnecessary to say anything more.

The pupils are examined annually, about the month of March, by the inspectors of the university. According to the result of these examinations, prizes called *prix de semestre* are then awarded. At the end of the classical year there are other prizes given for composition. At Paris there is a competition (*concours*) among the seven colleges ; the college of Versailles is also admitted to this competition. Each of these establishments sends its best pupils : the prizes are given to the successful candidates, with great ceremony, by the minister of public instruction, assisted by the university council and the academic council of Paris. The minister reads an address in French ; and a professor of rhetoric pronounces a Latin discourse on the occasion. Sensible people, however, are not dazzled by this university show ; and for some time, an opinion has prevailed among them, that the general competition among the colleges of Paris does infinitely more harm than good. The professors, being unavoidably influenced by motives of personal vanity, direct all their attention to the cleverest pupils of their class, neglecting the rest almost entirely. We see sometimes that pupils will devote themselves exclusively to that kind of composition for which they have most talent. For instance, a member of the rhetoric class who makes good Latin verses, but has less talent for writing Latin and French prose, directs all his industry and efforts to his favourite object. Such pupils, who are known by the name of prizemen (*gagneurs de prix*), are often admitted gratuitously into institutions ; but as they must pay for their board *in success*, they are worked beyond all reason in that branch in which they excel. Such is the method which some heads of institutions employ to *puff* their establishments ; but it is done at the expense of all sound education ; it tends to substitute a factitious dexterity for sound knowledge ; it is the triumph of charlatanism over truth and good sense. The suppression of the general *concours* would produce two salutary effects : the pupils of average or ordinary capacity would not be sacrificed to those who are at the head of the class ; and the latter, though they would in certain departments dazzle much less, would acquire more general and solid knowledge.

The punishments of pupils consist principally of fines, confinement to the school, and *pensums*. To perform a *pensum*, is to copy a certain number of verses : this is really an absurd punishment, and ought to be immediately abolished. In place of it, we might substitute some select passages to be committed to memory during the hours of recreation.

SIXTH QUESTION.—*What control is there with respect to persons who establish private schools on their own account? are they under the control of the Church?*

The heads of private establishments are, as we have remarked, under the superintendence of the University. If any great abuses are found in a private school, such school may be closed by a sentence of the University council, pronounced after the party accused has had an opportunity of replying to the charges. Private schools are in no respect under the control of the Church. We are inclined to think that the freedom of instruction which is proclaimed by the new charter, ought not to prevent the government from retaining some power of superintendence and discipline; but all judgments should be founded on the verdict of a jury.

SEVENTH QUESTION.—*What is the education of the peasantry? are there libraries, and reading-rooms for newspapers in the small villages?*

The answer to the third question contains the answer to the first part of this.

In the villages there are neither libraries nor reading-rooms. Libraries are only found in the larger kind of towns. In most small towns there are rooms or societies, by means of which persons of moderate income have the use of journals on paying a small sum annually. But the poorer class read the journals very little, except at Paris and some of the great towns. It is much to be desired that there should be in France a number of journals designed purposely to aid the progress of knowledge among the people; but, hitherto, no journal has been established on this plan. In the journals we find little else but news, political discussion, and the impress of the passions of the day. Facts, principles, and modes of teaching, which are useful and of universal application, are seldom to be found there.

Little has been yet done to improve the rural population. The establishment of communal libraries in the county towns and larger villages would powerfully contribute towards the diffusion of knowledge in such places, and would tend to give to the inhabitants a useful impulse. A draught of an ordonnance with this view had been prepared by the Ministry of 1828. It was the plan to establish libraries at first in the chief towns of the canton, and by degrees to extend them to the other communes: the libraries were to have been placed under the care of the primary instructor, and superintended by the municipal authority. The main stock of the books were to consist of the lives of great French generals; of the most skilful agriculturists, with an account of their discoveries; the lives of illustrious men who had risen from the body of the people; the life of Henry IV.; moral poetry; books on natural history; the gardener's and labourer's manual; and other books of a similar character to those enumerated. Such an institution would have at once aided the progress of useful knowledge, and

have improved the national character. At the moment when it was going to be put in operation, the 8th of August came, and the draught of the ordonnance had the ill fortune to be lost among the official papers.

EIGHTH QUESTION.—*What is the education of artisans in the towns? are there any libraries and reading-rooms for their use? what means have they for obtaining any scientific knowledge of the principles of their respective arts?*

This question has been already answered pretty fully under Nos. 3 and 7. We may add, that in all places where there is a public library, it is open gratuitously to all persons; that reading-rooms are entirely undertaken as private speculations, and are open to all persons, artisans included, who may choose to subscribe to them; but, in general, artisans make very little use of the libraries and reading-rooms.

In the answer to question three we stated what measures had been taken to instruct artisans in the scientific principles of their arts, and what satisfactory results had followed.

NINTH QUESTION.—1. *What are the expenses of a medical student attending the course of the medical faculties of Paris, Montpellier, and Strasbourg?*

2. *What particular advantages does each of these three places offer?*

3. *How may a student, who is a foreigner, obtain the greatest amount of instruction at the least expense?*

A student will find the best opportunities for study at Paris, but the expense of living there is greater than at either of the other two places; Strasbourg is the cheapest of the three. Imperfect knowledge of the country, and the necessity of having some one to assist him in his dissections, necessarily impose some expenses on a foreigner which a native can avoid, because he meets with other students from his own part of the country who are senior to himself, and who readily give him their aid in dissections. The great concourse of students at Paris renders it somewhat difficult to procure subjects, and they are consequently rather dear, costing nine francs a piece when not injected, and twelve francs when they are; besides this, some small sum is paid to the keeper of the dissecting-rooms.

The hospitals may be attended without payment, as well as all the clinical lectures on medicine and surgery; but to the expense of a residence at Paris, we must add the fees (*prix des inscriptions*), which must be paid even if the foreign student does not intend to take a degree in France. The following decision of the Faculty of Paris, of December 13, 1810, has reference to this:—Professors cannot give, in their own name, any certificate to a pupil who has attended the public courses of the school, unless it be proved to them that the pupil has paid his fees for these courses. In all cases it is necessary to be entered or registered on the faculty books in order to obtain tickets of admission to the courses.

A pupil can only commence in the first *trimestre* of the medical year or session, which begins on the 1st of November and ends on the 31st of August. The vacation is two months. In very special cases, the minister allows a student to commence in the *trimestre* of January; but he is never permitted to commence his course of studies for the degree of doctor in the third *trimestre* of the year. The degree of *bachelier-ès-lettres* is a necessary qualification for commencing medical studies.

The studies of each year are thus divided:—

1st year . . Winter . .	Anatomy.
	Physiology.
	Chemistry.
Summer . .	Physics (<i>physique</i>).
	Medical Natural History.
	<i>Hygiène.</i>
2nd year . . Winter . .	Anatomy.
	Physiology.
	Operative Surgery.
Summer . .	<i>Hygiène.</i>
	Practice of Physic. (<i>Pathologie interne</i>).
	Pharmacy.
3rd year . . Winter . .	Operative Surgery.
	Practice of Surgery. (<i>Pathologie externe</i>).
	Practice of Physic.
Summer . .	Medical <i>clinique</i> . (<i>Clinique interne</i>).
	Surgical <i>clinique</i> . (<i>Clinique externe</i>).
	Materia Medica.
4th year . . Winter . .	Medical <i>clinique</i> .
	Surgical <i>clinique</i> .
	Internal Pathology.
Summer . .	Legal Medicine.
	Therapeutics.
	Midwifery.

Independent of the instruction given in the *general* courses, there are instituted in the school, in all the branches taught, private courses for the benefit of the best pupils. These pupils are entitled *élèves de l'école pratique*. Admission to this school is open to competition; and there is also an annual competition during three years among these pupils for the school prizes. Three first prizes entitle a pupil to gratuitous admission.

The *concours* for the *élèves de l'école pratique*, of the first year, is founded on the medical sciences, which must be studied during the first four *inscriptions*; for those of the second year, on the sciences studied during the first eight *inscriptions*; and for those of the third, on the medical sciences, which ought to be studied during the first twelve *inscriptions*. Foreigners are admitted to compete with natives.

The *élèves de l'école pratique* have considerable advantages: they pay less for subjects; they perform chemical manipulations under the superintendence of the professors or the *agrégés*; they

receive tickets of admission to the private courses of the *agrégés*, which are given in the building belonging to the faculty; to the courses of the professors of anatomy and his assistants (*aides*); and to those of the clinical professor's assistants; they have also admission to the library of the school and to the anatomical museums, when they are not open to others. These facilities for study help to diminish the expense of the dissections and of the private courses which the pupils are obliged to attend, in addition to the courses of the faculty.

Medical pupils, foreigners as well as natives, between the age of eighteen and twenty-four, are allowed to witness the practice of the hospitals to which they are admitted, first as out-door pupils (*externes actifs au suppléans*), and then as in-door pupils (*internes*): these situations are open to competition. For several years past English and Swiss students have not only been admitted as *externes* but also as *internes* in the hospitals. The *externat* is for three years, and the *internat* for four; but from the first year of the *externat* a pupil is admissible to the *internat*. The *externes* who are attached to an hospital in the suburbs of Paris can be accommodated with lodgings there, and have also ample means for dissection.

Students, who are *internes*, receive an allowance of 500 francs and lodgings; if they are also maintained in the establishment, the allowance is 100 francs. The situation of *interne*, in the Paris hospitals, gives a student the opportunity of acquiring excellent practical knowledge. In no other place can he find such advantages; among which the diminution of his expenses is not one of the smallest.

The following sums are paid into the three faculties: for the doctorate, 1100 francs, as follows:—

University fee	785	francs.
Fee to the professors for examinations	215	
Fee on the seal of the diploma	100	

The payment of this sum is made in parts, in the following manner:—

Fifteen <i>inscriptions</i> for three months' courses	750	785 francs.
The sixteenth	35	
Five examinations, at 30 francs each	150	
Thesis	65	
Fee on the seal of diploma	100	165
		1100

The pupil has also to pay the expense of printing his thesis. The thesis and diploma seal are paid for at the same time.

The medical faculty of Paris offers much higher advantages to the student than the other faculties. From 120 to 150 francs per month is quite a sufficient sum to enable a student to live comfortably at Paris: clothing and the expense of the *inscriptions* are not included in this.

At Montpellier the student will find few advantages. There are

good professors at this place, but subjects for dissection are scarce, and there is not much disease to be seen in the hospitals ; yet students might find it useful to visit this celebrated school.

At Strasbourg the pupil will find more opportunities for dissection, and will get subjects cheaper ; the price of them is three francs. As four generally join at a subject, this makes the cost 75 centimes for each ; but it is usual to pay one franc each, the remaining franc going to the servant. At Strasbourg the instruction is more elementary, and consequently better adapted for beginners. In the clinical department each pupil has the care of one or more patients, under the superintendence of the professor. At Strasbourg there is a clinical establishment for midwifery, to which all pupils of the third and fourth years are admissible : they are summoned when a labour comes on, and they have also weekly opportunities, under the direction of the professor, of making practical inquiries, for the purpose of ascertaining the stage and other circumstances of the pregnancy (*ils peuvent pratiquer le toucher*).

From sixty to eighty francs per month is sufficient at Strasbourg for board and lodging. But the low price of living induces many pupils to pass their time in the *cafés* and beer-shops, and give themselves up to debauchery.

The clinical establishments of Strasbourg contain but few patients, and operations too seldom occur to enable a student to become a good surgeon. With two or three exceptions, the professors enjoy no great celebrity.

To sum up all, we may say that the expense, as far as University charges are concerned, is the same in the three faculties ; and that, if a student finds living dearer at Paris, this is amply compensated by the superior advantages of the metropolis. If the pupil can get admitted into the hospital as an *interne*, the expense will be less at Paris than in either of the other two faculties.

TENTH QUESTION.—*What is the legal education in France ? the time and expense that it requires ?*

We have not much to add to the information which the answer to the first question contains on this subject. The degree of licentiate is sufficient, as we have already said, to enable a person to become an advocate, and to fill the various offices of the courts and tribunals. To attain this degree three years of study are necessary. The whole expense, *inscriptions*, examinations, theses, and diploma, amounts to 750 francs. The degree of doctor requires one year's study more, and an additional expense of 460 francs. Few persons take the degree of doctor except those who intend to be teachers of jurisprudence.

To be admitted licentiate it is necessary to undergo four examinations, and to have written one thesis ; and to take the degree of doctor, two additional examinations, and one more thesis, are necessary.

The examinations for the degree of licentiate are on the civil

code, the institutes of Justinian, and the procedure of the courts. In the faculties of law, where there is a chair of *droit administratif*, the students are also examined on this branch of jurisprudence. The examinations for the degree of doctor are on all the subjects taught in the faculty.

In general the studies required in the faculty of law are not considered sufficient to make a complete lawyer. Most students add to the regular course of studies some experience in the office of an *avoué*, by which they acquire habits of business, and a practical knowledge of the forms of proceeding. After this they attend the courts, which is termed *faire son stage*: a person cannot have his name entered on the list of advocates until after three years' attendance of this kind. The *Stagiaires* form societies of their own body, under the title of *conférences*, in which they exercise themselves in pleading on imaginary cases, and in discussing questions of law. To become a magistrate it is necessary to have attended the courts for two years.

The French codes are simple and clear, but it was not possible for them to comprise every case. Whenever, therefore, difficulties arise which they have not provided for, it is necessary to recur to the general principles of law; so that, in its whole extent, the science of law is perhaps as extensive and as laborious a study in France as in other countries. The reports of the judgments of the different courts in the kingdom, of themselves make a library; and it is absolutely necessary to study them, because to know the laws is not enough, without knowing also the way in which the courts interpret and apply them. The management of a cause is also an embarrassing and complicated kind of business. After stating these facts we cannot be surprised if the most skilful lawyers continually find something to learn.

It is a pretty general wish that the government should establish chairs of *droit public* and of *droit administratif* in all the faculties. These chairs only exist in certain faculties, as we have seen in the answer to the first question. Chairs of public economy and statistics should also be established, for these sciences are not sufficiently diffused in France. In a government like the French, the knowledge of the lawyer and that of the *publiciste* should unite and mutually aid one another.

REVIEWS.

PLUTARCH'S LIVES.

Plutarch's Lives translated from the original Greek; with Notes Critical and Historical, and a Life of Plutarch, by John Langhorne, D.D., and Wm. Langhorne, A.M., in 6 vols. The Second Edition, by the Rev. Francis Wrangham, M.A., F.R.S., with Corrections and Additions. 8vo. London, 1813.

It is with profound reverence that we undertake to speak of Plutarch in a journal that is exclusively devoted to a most important object, the advancement of liberal education. We attribute the feelings of respect and deference which fill and even oppress our minds, not to our deep sense of admiration for that marvellous learning, which acquired many ages ago for the philosopher of Chaeronea, the homage of his contemporaries, and has preserved unimpaired through succeeding generations to the present day, his best and purest glory; nor yet to our conviction, that he is well entitled to all the encomiums that have been heaped upon him with an unsparing hand. In his own language he has been named by his countrymen, ὁ Θεοπέσιος, ὁ Θειότατος, ὁ φιλοσοφίας ἀπάσιος ἀφεοδίτης καὶ λύγα; he has been recognised by Wytténbach, a modern possessed of the erudition of an ancient Greek, as one gifted with 'infinita et ferè divini doctrinæ copia,' and in the long interval that separates the scholars of the first centuries of our æra from the nineteenth, he has uniformly been hailed with the like applause. We hesitate, however, and feel that we are unable to speak of this wise man as we would, not because he is, as Scaliger declared, and as far as we are able to estimate his value, most justly declared, 'totius sapientiae oculus,' but because he is the representative of the education of the ancient world; because 'cet homme noble, consommé en tout rare scévoir,' as he is styled by one of the most respectable of his admirers, stands before us as the legate, the ambassador, the orator on behalf of those institutions, whereby in the old time men were rendered wise and virtuous. The magnitude and the difficulty of the subject, when we view him, as we ought, in this character, and the paramount importance of his mission impede us in the brief examination, which we have proposed to ourselves, of matters, that to a superficial observer will possibly appear to be not merely easy, but stale and trite, and compel us to beg

for indulgence in writing concerning a theme, that at first sight may seem worthy only of the exercise of a schoolboy.

With a sedate and composed learning, with genius tempered by a most solid judgment and a rare moderation, Plutarch sedulously and unceasingly enforces the necessity of a careful education ; he urges the solemn duty of instructing the young with an equable and resistless flood of words, of arguments and of examples, that proceeding onwards, like the flowing tide, surmounts, or bears down, every obstacle. What can be imagined more learned than Plutarch, one of his admirers asks ; what that is wiser has ever appeared since the creation of man ? It is in exhorting the old to teach and the young to learn, that the whole of his learning and wisdom are uniformly exerted ; nor is it for the sake of erudition, it is not to attain to proficiency in science, that he repeats and strengthens his exhortations, although he values knowledge higher than other writers for its own sake, but he chiefly prizes, and principally labours to recommend knowledge, because knowledge is the foundation of virtue, the solid basis of morals, and upon morals ; as he perpetually inculcates, all real excellence, all happiness and prosperity, whether public or private, can alone securely rest.

There is no other author, ancient or modern, of whose writings morality is so manifestly and unquestionably the sole and entire scope ; that sound, undeviating morality, which is created by a rational and elaborate education : it is no wonder then, if the instructors of youth feel and express much anxiety, when they attempt to speak of such a man ; for, if it were possible that Plutarch should be contemned, their honourable occupation must of necessity cease, and in proportion as his merits are recognised and appreciated, will the anxious, but pleasant, toil of imparting knowledge be productive of good fruit. Those particulars of his life, which have been transmitted to us, are generally known. He was born at Chæronea, a town in Boeotia, in the latter part of the first century : and his distinguished ability would be almost sufficient in itself to remove the imputation of stupidity under which the inhabitants of his native country laboured. He resided for some time at Rome, and enjoyed the friendship and patronage of Trajan, a wise and virtuous prince : such things as these, with which all persons are acquainted, it would be tedious to repeat. During his residence in Rome he was eminent as a teacher of philosophy, and it has been conjectured that many of the treatises which form the bulky collection of ethical, literary and historical works, designated by the title '*Moralia*,' were origin-

ally delivered as lectures to his numerous and illustrious audience. This miscellaneous assemblage is rich in choice morsels of philology, philosophy, and history, and is so intimately connected in many respects with education, that it might deserve notice, if our attention were not called towards a more important and popular work.

The well known saying of the learned Theodore Gaza may be applied to Plutarch as the author of the '*Moralia*,' that if Plato, Plutarch, and Pliny were preserved, none of the sciences would be lost ; but it is doubtless to the author of the Parallel Lives, that the still higher tribute of praise was rendered by the same ingenious person. '*Ego quidem cum Theodoro Gazā sentio, qui interrogatus, si omnes libri perdendi essent, et si optio daretur, quem servatum vellet, Plutarchum dixit. Est enim verè thesaurus eorum, quæ præstantissima in omnibus aliis scriptoribus sparsim inveniuntur, sive philosophiam, et alias disciplinas, sive historiam Græcam et Romanam spectes.*' It is not the object of this article to discuss the historical value of Plutarch's Lives. That he is very often careless and inaccurate, we readily admit ; but, on the other hand, we contend that he has preserved the knowledge of more curious facts than a superficial reader of his Lives may be inclined to acknowledge. The latter work most probably extorted from a bigoted Byzantine the wish which he has expressed in eight quaint verses, that if it be possible for any of the heathens to be saved, Plato and Plutarch may enjoy that happiness. But our love for the writer of volumes that are not less full of incentives to virtue than of curious and attractive matter, leads us needlessly to repeat the laudatory testimonies of which no one can be ignorant. We have no desire to create surprise by uttering a paradox, when we affirm, that Plutarch's Lives are known to all and to few. Such, however, is literally the case ; but, as is usual in startling assertions, one word in the proposition is used in more than one sense, and that word in the present instance is *known*. Through the medium of an unfaithful translation they are imperfectly known to every reader ; but they are perfectly known to a small number of persons only, for few, very few in comparison with the multitude, who have found delight and instruction in the various interpretations, have read any portion of the original. We may assert, indeed, without fear of contradiction, that they are but few absolutely ; of those who are able to read Greek with tolerable facility, the majority are detained by those authors, whose claims upon their attention are more immediate, and are deterred by apprehensions of difficulty, and by certain errors and prejudices, of which we will briefly speak.

If, however, the course of instruction were as enlarged and generous as the most sanguine could anticipate, the entire amount of students, who could be admitted to collect the deep sense of Plutarch from his very words, would never be considerable. We earnestly desire that as many as possible should participate in the pleasure and profit that we have ourselves derived from an attentive perusal of the Greek text, but this, however desirable, is not the principal object of our solicitude: we do not long, with respect to this author, for an aristocracy of learning, although we are not unwilling that the nobles of literature in some other departments of knowledge should enjoy whatever honourable and valuable privileges their superior talents and industry can win; we claim a commonwealth of instruction, a pure republic of institution in the precepts and examples of morality; we aspire after a full and idiomatic translation into our mother-tongue. A translation into such English, that the learned may be able to point out in a satisfactory manner, the causes of the delight they feel in perusing it, and the unlearned may not know why they read it with so much pleasure; a translation so full, that no portion of the ample meaning of the original may escape, and so plain, that there may be no obscurity in the style; no other difficulties than those, which are inherent in the matter itself.

We regret much that no such version exists in our language. The first edition of the Greek text of Plutarch's Lives appeared at Florence in the year 1517, and two years afterwards it was republished by Aldus. From the first revival of letters in Europe, several Latin versions were successively printed, some of these most probably were of considerable antiquity, being copied from old MSS.; for Joannes Sarisberiensis, who extolled him in the twelfth century, had certainly only read his works in Latin. The first translation into any living tongue we are commonly told was made by Lodovico Domenichi, who rendered it into Italian with much brevity and spirit; it was published at Venice by Giolito in 1560, and forms one of the genis in the famous Collana. It was afterwards republished by Sansovino, who corrected it in many places, as he informs us, from Latin versions, and from the Greek text; it is a very respectable performance; the style, if a foreigner may presume to judge of such a matter, being agreeable, and we have sometimes found, that Domenichi was faithful to the original, where subsequent translators were in error. Dominique Ricard appears to speak of this work, as if Sansovino, and not Domenichi, had been the translator, and our interpreters, who have collected

industriously the blunders of all nations, have adopted the mistake, as well as the assertion, that it was the first translation into a modern tongue.

Before the publication of the Greek text at Florence, the *editio princeps* had already appeared at Rome; a Latin version by different hands, by about eight persons, was printed about the year 1470, in folio, and it affords a beautiful specimen of early typography. It has been conjectured that this first and princely edition forms the base of all the vernacular versions, the translators having sometimes amended them by an occasional comparison with the Greek text, but more frequently impaired the sense by a collation with other and less faithful Latin interpretations, and destroyed the vigour by paraphrastic expositions of those passages that seemed to be of difficult comprehension to ordinary readers; it is certain that the Italian translation of Domenichi is taken from the *editio princeps*, and it retains the brevity of the model. Jaconello, of Rieti, however, had already produced a vernacular translation of Plutarch's Lives. It was handsomely printed in quarto at Aquila, in the year 1482; it resembles the *editio princeps* in many respects, but in others it gives a different sense, and the style is more diffused. Being soon superseded by Domenichi, it was neglected and forgotten. We have seen the first part only, containing twenty-six lives, and we know not if the remainder was ever published. Whether any one of the languages of Europe possesses a version, that was made immediately from the Greek, it is not to our present purpose to inquire; it is unhappily but too easy to convince ourselves that our own is not so fortunate, nor have those translations, from which our English interpreters have chosen to borrow, flowed directly from the native source.

In the year 1559 appeared the excellent translation, of which it has been said, ‘*quoique en vieux Gaulois, elle a un air de fraîcheur qui la fait rejeunir de jour en jour*:’ the author compared it in many places with the Greek text, both as it was found in the printed editions, which then existed, and in some MSS. to which he had access, and he made some alterations; but on account of the corrupt state of the original, and possibly through want of critical skill, they were not unfrequently for the worse; his meritorious work, however, was certainly not drawn from the Greek, but, like Domenichi, from the Roman version.

‘*L'office d'un propre traducteur*,’ says the illustrious Amyot in his preface, ‘*ne gist pas seulement à rendre fidèlement la sentence de son autheur, mais aussi à représenter aucunement et à adom-*

brer la forme du style et maniere de parler d'iceluy.—Car encore puis je bien asseurer, quelque dur ou rude que soit le langage, que ma traduction sera beaucoup plus aisée aux Français, que l'original grec à ceulx mesmes qui sont les plus exercitez en la langue grecque pour une façon d'escrire plus aiguë, plus docte et pressée, que claire, polie ou aisée, qui est propre à Plutarque.'

The peculiarities in the form of style and manner of speaking, which Amyot ascribes to Plutarch, are more conspicuous in the version, from which he generally derived his admirable work, than in the philosopher himself. ' *Vetus interpres Gallicus*, ' says the acute Reiske of Amyot; ' *vel potius is qui illi in ista interpretatione praebat*; ' it is impossible, indeed, to pretend that his translation, however valuable, was made directly from the Greek. It is certainly most desirable to possess a full and faithful version, that shall exactly give the precise meaning of the original, without exceeding, or falling short, in any instance, of the just sense of the author; such a minutely accurate copy is the object of our earnest wish; nevertheless there is one other possession that we covet even more—it is a picture that shall live, breathe, and move;—a copy that shall have the spirit and animation of the original. Herein consists the true greatness of Amyot; his transcript of the ' *opus aureum, diurnā manu nocturnāque versandum*, ' is not less fresh and legible, than the autograph of the Boëtian penman. We shall understand how much we are indebted to history; he says: ' *Si nous imaginons seulement en quelle horreur de tenebres, et quelle fondrière d'ignorance bestiale et pestilente nous serions abysmez, si la souvenance de tout ce qui s'est fait, ou qui est advenu avant que nous fussions nez, estoit entierement abolie et esteincte.*' His novelty and vigour of expression, as exhibited in the fragment of a sentence, which we have cited, demonstrate at once, more plainly than any language we could employ, his singular fitness for the cheering office of infusing into the readers of his own day a relish for the consummate and most finished judgment of Plutarch. His countrymen still love and cherish the venerable translation of the grand almoner of France, although it has sometimes been criticised unfavourably by persons who had no feeling for its beauties, and were insensible to its merits; what boots it that a writer of so much energy occasionally fell into a few faults, which were chiefly caused perhaps by the corruption of the Greek text? Many, and handsome editions have spread abroad, and have handed down, for nearly three centuries, this distinguished ornament of French literature. If our limits would permit, we would gladly set forth some

specimens of the rare felicity of this interpreter. This celebrated version gave birth to the first English translation ; Sir Thomas North dedicated to Queen Elizabeth, in the year 1579, a work, which his preface shows he had executed with a hearty good will.

‘ There is no prophane studie better than Plutarke,’ says the worthy knight, ‘ all other learning is private, fitter for universities then cities ; fuller of contemplation then experience ; more commendable in students themselves then profitable unto others. Whereas stories are fit for everie place, reach to all persons, serve for all times ; teach the living, revive the dead ; so far excelling all other books, as it is better to see learning in noblemen’s lives, then to read it in philosophers’ writings. Now for the author : I will not deny that love may deceive me, for I must needs love him with whom I have taken so much pain ; but I believe I might be bold to affirm that he hath written the profitablist storie of all authours. For all other were fain to take their matter as the fortune of the countries whereof they wrote fell out ; but this man being excellent in wit, learning, and experience, hath chosen the special acts of the best persons of the famousest nations of the world. But I will leave the judgment to yourselves, my only purpose is to desire you to excuse the faults of my translation with your owne gentlenesse, and with the opinion of my diligence and good intent.’

This valuable translation was avowedly made from the French of Amyot ; but the ingenious interpreter was gifted, like his precursor, with so much spirit and native talent, and performed his good office with so much ability and diligence, that it was a precious addition to English letters ; and being animated with that vivid force, which separates dead writers from the living, it was much read and admired in its day, and is still, beyond comparison, the best version of the parallel lives that the English tongue affords. We cannot deny ourselves the pleasure of transcribing one beautiful passage, especially since the volume, if not scarce, is at least not very common :—

‘ Cato would say he never bought bondman or slave dearer then a thousand five hundred pence, as one that sought not for fine made men, and goodly personages, but strong fellows that could away with paines, as carters, horse-keepers, neatherds, and such like : and againe he would sell them when they were old, because he would not keepe them when they could do no service. To conclude, he was of opinion, that a man bought anything deare, that was for little purpose : yea, though he gave but a farthing for it, he thought it too much to bestow so litle, for that which needed not. He would have men purchase houses, that had more store of arable land and pasture, then of fine hortyards or gardeins. Some say, he did thus for very misery and covetousnesse : other thinke and tooke it that he lived so sparingly, to move others by his example

to cut off all superfluity and wast. Neverthelesse, to sell slaves in that sort, or to turne them out of doores when you have had the service of all their youth, and that they are grown old, as you use brute beasts that have served whilst they may for age: me thinkes that must needs proceed of too severe and greedy a nature, that hath no longer regard or consideration of humanity, then whilst one is able to do another good. For we see, gentlenesse goeth further then justice. For nature teacheth us to use justice only unto men, but gentlenesse sometimes is shewed unto brute beasts: and that commeth from the very fountaine and spring of all curtesie and humanity, which should never dry up in any man living. For to say truly, to keep cast horses spoiled in our service, and dogs also, not only when they are whelpes, but when they be old: be even tokens of love and kindnes. As the Athenians made a law, when they builded their temple called Hecatompedon: that they should suffer the moyles and mulets that did service in their carriages about the building of the same, to graze every where, without let or trouble of any man. And they say, there was one of their moyles thus turned at liberty, that came herselfe to the place to labour, going before all the other draught beasts, that drew up carts laden towards the castell, and kept them company, as though she seemed to encourage the rest to draw: which the people liked so well in the poore beast, that they appointed she should be kept whilst she lived, at the charge of the town. And yet at this present are the graves of Cimon's mares to be seene, that wun him thrice together the prize of the horse-race at the games Olympian, and they are hard by the grave of Cimon himselfe. We heare of diverse also that had buried their dogs they brought up in their house, or that waited on them: as among other, old Xanthippus buried his dogge in the top of a cliffe, which is called the dog's pit till this day. For when the people of Athens did forsake their city at the comming downe of King Xerxes, this dogge followed his maister, swimming in the sea by his galley's side, from the firme land, unto the isle of Salamina. And there is no reason to use living and sensible things, as we would use an old shoo or a rag, to cast it out upon the dunghill when we have worn it, and can serve us no longer. For if it were for no respect else, but to use us alwaies to humanitie, we must ever shew ourselves kind and gentle, even in such small points of pitie. And as for me, I could never find in my heart to sell my draught oxe that had ploughed my land a long time, because he could plough no longer for age: and much less my slave, to sell him for a little money, out of the country where he had dwelt a long time, to plucke him from his old trade of life wherewith he was best acquainted, and then specially, when he shall be as unprofitable for the buyer, as also for the seller. But Cato, on the other side, glорied that he left his horse in Spaine he had served on in the warres during his consulship, because he would not put the commonwealth to the charge of bringing him home by sea into Italie. Now a question might be made of this, and probable reason of either side, whether this was noblenesse or niggard-

linesse in him: but otherwise to say truly, he was a man of wonderfull abstinence.'

To convince our readers how unworthy the languid, feeble interpreters, of whom we will speak presently, are to supply the place of a writer so spirited as Sir Thomas North, we will set before them a passage from the Life of Plutarch by the Langhornes :—

' But when we bring him to the school of Pythagoras, what idea shall we entertain of Plutarch? Shall we consider him any longer as an academician, or as a citizen of the philosophical world? Constitutionally benevolent and humane, he there finds a system of divinity and philosophy perfectly adapted to his natural sentiments. The whole animal creation he had originally looked upon with an instinctive tenderness: but when the amiable Pythagoras, the priest of nature, in defence of the common privileges of her creatures, had called religion into their cause; when he sought to soften the cruelty, which man had exercised against them, by the honest art of insinuating the doctrine of transmigration; how could Plutarch refuse to serve under him? It was impossible. He adopted the doctrine of the Metempsychosis. He entered into the merciful scheme of Pythagoras; and, like him, diverted the cruelty of the human species, by appealing to the selfish qualities of their nature,—by subduing their pride, and exciting their sympathy, while he showed them that their future existence might be the condition of a reptile. This spirit and disposition break strongly from him in his observations on the elder Cato. And as nothing can exhibit a more lively picture of him than these paintings of his own, we shall not scruple to introduce them here.'

The author of the letters of Theodosius and Constantia then presents, in his own puny and affected phrases, the passage which we have cited from Sir Thomas North, and continues thus :—

' What an amiable idea this extract gives us of our benevolent philosopher! how worthy the instructions of the sage of Samos! how honourable to that master of truth and universal science, whose sentiments were decisive in every doubtful matter, and whose maxims were received with silent conviction !'

It is evident that this writer was not a fit person to be the representative of Plutarch with the British nation. North's translation was nearly superseded by that which was published under the auspices of Dryden, and was executed, like the versions that constituted the *editio princeps*, by several, but more numerous hands: it was hurried over with a carelessness and inaccuracy quite worthy of the admirable but most negligent manager of the company. This joint work, which has properly been termed motley, is inconsistent, unequal, and deformed by many gross errors; but several of the contri-

butors were men of learning and ability, and some passages are rendered with spirit. It is, however, in all respects, save only that the language is less antiquated, inferior to Sir Thomas North's version, as it is superior to that of the Langhornes, whose merit is limited to having rectified numerous mistakes. These two last translators were totally unfit to fill in a becoming manner the manly office which they took upon themselves, and they uniformly and entirely failed in the more important functions of interpretation. Dryden's company did not by any means perform what the publisher promised the reader, namely,—‘To transfuse the very spirit of the original into the traduction ; and, in one word, to make Plutarch's worthies yet more famous, by a translation that gives a further lustre even to Plutarch himself.’ But the Langhornes have made a worse bargain for us than the hasty, needy bard who preceded them; for the trifling advantage of a little additional correctness they have transmuted the solid gold of the Chæronean into vile pinchbeck and tawdry tinsel. The translation of Plutarch's Lives, by Dacier, was preceded by another French version of small repute, the story of which has been thus briefly told :—‘ Les Vies de Plutarque furent traduites dans le siècle dernier par l'Abbé Tullemant, que Boileau appelle le sec traducteur du Français d'Amyot.’ Dacier was a man of great learning, and if he did not derive his translation altogether from the Greek text, he certainly had it always before him, and frequently consulted it in the course of his long labour. Scholars admire his erudition, and his countrymen commend the purity of his style, but his version was never popular. Having condemned the style of Plutarch, Dacier says, in his preface,—

‘ Dans la traduction je tasche de conserver toute la force qu'il a, et j'aurois bien voulu pouvoir lui donner les agrémens qui lui manquent. Je separe, et je renverse mesme ses périodes, quand elles sont trop embarrassées, ou que le génie de notre langue ne s'accorde pas de l'ordre qu'il a suivi.’

Some people are always tormented by an itch to improve everything, by a desire, ‘luy donner les agrémens qui luy manquent:’ Dacier cuts the periods of Plutarch into shreds, and exhibits to his readers a Gallicized Greek; but he more commonly errs by producing a paraphrase instead of a translation. Amyot, notwithstanding his vivacity, is sometimes paraphrastic; but Dacier has increased this defect to such an extent as to have succeeded almost in making Plutarch unreadable. A subsequent translator, Dominique Ricard, says the style of the original is some-

what diffuse, but the amplifications of Dacier have rendered it repulsively prolix ; ‘ il y règne une monotonie qui a fait dire à une femme d'esprit,’ who is doubtless the highest authority in the opinion of a French critic, ‘ que sa traduction avoit l'air triste.’ The learned Dacier allows that ‘ c'est dans le bon-sens que sa plume est toujours trempée ;’ it is a whimsical figure, although it be just, to say that Plutarch always used good sense instead of ink : having acknowledged the excellence of the matter, he is unjust to the manner of the philosopher, and unduly depreciates his style. ‘ Tamen dissimulare non possum ;’ Vossius writes concerning Plutarch, ‘ Dictionem ejus gravem quidem esse, sed duriusculam videri. Verum leviculum hunc defectum multi-jugâ adeo scientiâ abunde summus vir compensat.’ This is the rational censure of a scholar ; others have affirmed that he forms the judgment of youth, and leads more certainly to wisdom and virtue by a diffuse and plain way of writing than a more artful and subtle teacher. Some critics have even declared that his diction is *aspera morosaque*. Those atti-cists who are offended by every phrase or word that does not occur in the works of some five or six writers, and who would reject Demosthenes, if he were without the pale, because his language differs from that of Xenophon or of Plato, and are ready to condemn Herodotus as an ignorant and most Ionic barbarian, may reasonably complain of the morose asperity of a remote savage, whose native place was full eighty miles from Athens. Thus certain purists of Italy will not tolerate any modes of speech that cannot boast the authority of Boccaccio ; and, at the revival of letters, a certain sect in the same country, would not endure any phraseology but that of Cicero, deeming Cæsar and Livy, of course, unworthy of the name of classics. The last form of unnianly affectation has been ridiculed most felicitously by Erasmus, and the productions of all such effeminate pedants are of necessity cold and insipid. We cannot wonder if the style of Plutarch is proscribed by these persons, and the silly censure has been repeated, because it supplies a convenient excuse for neglecting an author who certainly presents, at first, some difficulties, and is not without obscure and intricate passages, which perplex even the experienced philologist. In consequence of this neglect, it was long before the public received an amended and purified text. And the ignorant having repeated and aggravated, as they are wont, the mitigated censure of scholars, the character of Plutarch's style has been finally deemed by many as utterly barbarous, and translators have been brought to believe that they might

render his energetic and pregnant periods in any language they chose to adopt, or might even venture upon the more offensive injustice of improving their author, and were at liberty '*luy donner les agrémens qui luy manquent.*'

The laboured, but unsuccessful, translation of Dacier produced two recensions of Dryden's 'motley' version, of which it is unnecessary for us to speak: it produced also that of the Langhorne. Dacier had injured his author by the large infusion of the watery paraphrase in which he delighted, and reduced his pages to a condition resembling the interpretation which was printed in the margin of the Delphin editions, in order to explain the text to the most Serene Prince and to other learners; to read the parallel lives in this form, therefore, would be to peruse Virgil or Horace in the *interpretatio*, or rather, perhaps, Cæsar or Sallust, if the editors had furnished us with the means of making so cruel an experiment. The Langhorne compared the French of Dacier, whose notes they abridged, with the Latin translations which accompanied the later editions of the Greek text, for the Latin interpretations had been amended and corrected by the Greek: it is possible, moreover,—it is barely possible, that they may sometimes have consulted the Greek itself.

'Sensible that the principal art of a translator is (these good men declare) to prevent the peculiarities of his author's language from stealing into his own, they have been particularly attentive to this point, and have generally endeavoured to keep their English unmixed with Greek. At the same time it must be observed that there is frequently a great similarity in the structure of the two languages; yet that resemblance, in some instances, makes it the more necessary to guard against it on the whole. This care is of the greater consequence, because Plutarch's Lives generally pass through the hands of young people, who ought to read their own language in its native purity, unmixed and untainted with the idioms of different tongues.'

He must be a very grave, and therefore, probably, a very wise man, who can read this passage without laughing heartily, and a very credulous one if he can believe that the person who wrote or adopted it was qualified to translate any author from any ancient language into any modern tongue. It is certain, at least, that Dr. John Langhorne and his brother William have been eminently successful 'in preventing the peculiarities of their author's language from stealing into their own,' and 'in keeping their English unmixed with Greek.' In speaking of a translation by such persons the question is, not whether this, or that, or any passage be faithfully rendered, but whether a mind of such a texture and

dimensions can convey to us the majestic morality of Plutarch, and stand in the place of the representative of the education of the ancient world?

Dr. John Langhorne is the author of several works designed for young ladies; they are not of the first class in that very humble department of letters; affected, insipid, barren, but moral enough perhaps, for if they were not, what would they be? All who have examined these feeble efforts will shudder at the thought of consigning Plutarch to such unworthy hands. William Langhorne is known as the author of some sermons. It was not till some time after the publication of the Langhornes' version, that a new edition of it appeared by Archdeacon Wrangham. We always feel peculiarly grateful for any contribution to good letters from those to whom fortune has given leisure and affluence, and we are anxious to favour and encourage, and to view in the most flattering light, such accessions. In the present instance, however, so worthless are the additions that have been made to a work in itself of small value, that it is impossible for the most indulgent critics, unless they can consent to forego the critical office altogether, to refrain from noting the work, of which the title is prefixed to this article, with distinct and unequivocal censure. The alterations in the translation are very insignificant. The editor gives the following account of his labours in his preface:—

‘ The translation of Plutarch's Lives by the Langhornes is almost the only one ever opened by the English reader: and had it not been marked by some slight incorrectness of version, especially in the poetical quotations, some few trivialities of diction, some capricious omission of paragraphs—which are now, without any violation, it is hoped, of delicacy, inserted,—and some considerable deficiencies in the notes, the present editor would have shrunk from touching a work executed upon the whole in so very creditable a manner.’

In inserting paragraphs capriciously omitted, the present editor has acted judiciously; but it is impossible to commend his notes. They are very numerous; for the editor seems to concur in their admiration of that brilliant discovery ‘marginal writing,’ with the translators, who lament that Plutarch was not acquainted with the modern practice of self-annotation, and do not hesitate to assert that he would have used it himself very freely.

‘ Such are the liberties which we have taken with Plutarch; and the learned, we flatter ourselves, will not think them too great. Yet there is one more, which, if we could have presumed upon it, would have made his book infinitely more uniform and agreeable.

We often wished to throw out of the text into the notes those tedious and digressive comments which spoil the beauty and order of his narrative, mortifying the expectation (frequently when it is most essentially interested), and destroy the natural influence of his story, by turning the attention into a different channel. What, for instance, can be more irksome and impertinent, than a long dissertation on a point of natural philosophy starting up at the very crisis of some important action? Every reader of Plutarch must have felt the pain of these unseasonable digressions; but we could not, upon our own pleasure or authority, remove them.'

We must confess, notwithstanding that we entertain serious doubts whether Plutarch, or any other Greek, would have tolerated the monstrous absurdity of an author writing a commentary upon his own work, and explaining his own meaning by the assistance of his own annotations: if the note consist only of what is superfluous, he would have said omit it altogether, if the text be sufficiently clear, it is unnecessary; if it be requisite to illustrate it, why, he would ask, do you write so obscurely as to render illustration indispensable?—amend the text, make it sufficiently perspicuous without extrinsic assistance. Leave annotation to posterity; it will be time enough five centuries hence, when language and manners are changed, to compose explanatory notes upon your writings, for if they are not intelligible now, when will they be so? But, to return to the editor's notes upon Plutarch,—upon that work which Suidas has called *καλλίσην καὶ τοῖς ἀνδρώνοις λυσιτελεσάτνης ισοπίαν*,—let us see what beauty or profit they afford. A slight examination of these notes would show that they consist of a few hackneyed quotations in Greek and Latin, but chiefly in the latter language, and from Horace; of some familiar scraps of English poetry, much fulsome flattery, and a large supply of oh's and ah's, with a frequent use of the word, alas!

It would be a long and tedious task to prove that nearly everything of value in the editor's notes is borrowed from the notes of Dacier and Ricard; those who are curious on this point may easily satisfy themselves by comparing the annotations upon one of the fifty lives, with the corresponding portion of the French translations and commentaries; even when he ventures no further than to tell us the modern and well-known name of some ancient well-known place, we shall certainly find the same information in Ricard's edition. We will rather speak of the original matter, and we will give some examples of the notes without any comment. 'Mellaria. *hod.* Tariffa, between Trafalgar and Gibraltar, in the mouth of the straits. Cape Spartel and Trafalgar, Abyla and Gibraltar, are places well known to seamen who sail into

the Mediterranean. To what seamen, to what landsmen, we may now proudly ask, will Trafalgar henceforward be unknown?' Coriolanus is presented with a civic crown, whereupon we are informed, 'It does not anywhere appear that the ancients made use of the oak in ship-building: how much nobler an encomium might an English historian afford that tree, than Plutarch could give it; particularly since those memorable days, which have bestowed immortality upon the names of Howe, and Duncan, and St. Vincent, and NELSON!' When the Greenwich pensioners shall read Plutarch, this note will doubtless delight them. The following also is calculated for the meridian of Greenwich; to illustrate the comparison of Pericles and Fabius Maximus, we find these words at the bottom of the page: 'At the moment in which I write this, a French fleet of twenty-two sail of the line, with twelve thousand troops on board, is flying before half the number of ships of the British navy, under the command of a Nelson! Flying, I add, with prophetic but fruitless dismay from the fate which awaited them off THE IMMORTAL CAPE TRAFALGAR!' Such gasconades are totally unworthy of a scholar, and entirely useless in the way of illustration.

Some donation being mentioned in the Life of Aristides, the editor exclaims—

'A most honourable proof of their perseverance in the practice of an eminent public virtue! The English likewise, not to mention innumerable and most liberal pensions paid on account of public service, have their *Herculeus Lar* at Blenheim, and will probably soon have an equally magnificent and equally merited Trafalgar.'

We will add one sample only of this method of explaining an ancient writer. It is stated in the Life of Julius Cæsar, that 'the Britons suffered more than the Romans gained; for there was nothing worth taking from a people who were so poor, and lived in so much wretchedness.' The editor has subjoined this note:—

'It is amusing to an Englishman (*toto divisus orbe*, as he may still be pronounced, from his political independence, no less than his fortunate insularity) to read such passages as these, amidst the opulence and comforts flowing from modern improvements in the agriculture, and the extraordinary extensions of the commerce of his native island,—not to mention that proud spirit of patriotism, which sets invasion at defiance, and those pure flowers of Protestantism, which were sublimed out of the defiled crucible of the Romish church! What is Plutarch's Chæronea? What is Cæsar's Rome herself compared with still increasing London?'

Marcellus, by carrying home the statues and paintings from Syracuse, unhappily and unintentionally gave occasion

to the following note :—‘Upon this Livy (xxv. 40) piously moralizes, and Polybius appropriates an excellent chapter (ix. 10) to the inquiry “whether the Romans did well in transmitting home the ornaments of conquered cities?” A little of the morality of these writers might have been circulated in the French armies, with no disadvantage to unhappy Italy.’ The authorities are borrowed from Dacier; had he consulted them, he would have found that it is not a question of morality, of justice to the conquered, with Polybius, but of expediency, since such spoils introduce luxury and provoke envy.

The editor is fond of finding parallels in Scripture to events in profane history; his professional studies ought to have qualified him for affording such illustration, but he is not less unhappy here than in the other regions of knowledge. For example; respecting Aratus, who was poisoned by his friend, King Philip, Plutarch writes,—

‘He was not ignorant of the cause of his disorder; but, knowing that it availed nothing to discover it to the world, he bore it quietly and in silence, as if it had been an ordinary distemper. When one of his friends, indeed, came to visit him in his chamber, and expressed his surprise at seeing him spit blood, he said, “Such, Cephalon, are the fruits of royal friendship.”’

The editor subjoins, ‘Juvenal knew the *miseræ magnæque pallor amicitiæ*; and David appears to have formed nearly a similar estimate of the stability of princely regard, Psalm cxlvii. 2.’ In the passage referred to, David, himself a prince, forms no such estimate; ‘O put not your trust in princes, nor in any child of man, for there is no help in them:’ trust not princes, nor any other man whatever, he says, not because they are unstable in their regards, but because they are mortal. He gives this reason in the next verse; ‘For when the breath of man goeth forth he shall turn again to his earth, and then all his thoughts perish:’ and the moral of the whole psalm is, trust Him only who never dies. The other references to Holy Writ are commonly not less irrelevant, so that the attentive reader wonders how such a careless habit of mind could possibly be engendered. It is an unpleasant and an unprofitable office, however, to heap up instances. The Langhorne and Wrangham have much *slipslop* in common; they call the Latin version the ‘*scholiast's Latin*;’ they tell us that ‘the *schoolmen*, *i. e.* Ramus, Aquinas, and Occam, ‘despise Plutarch's Greek:’ instead of the diffuseness of advocates they write ‘the *diffusion* of advocates,’ without meaning to allude to those learned persons being scattered over the country on

the circuits. They speak of asterisms without understanding the meaning of the word ; ' the additions are designated by an asterism,' says the editor, respecting his notes. An asterisk is a small star, but an asterism is a constellation, a set of stars ; to constitute which not one star, but three luminaries at least would be required.

It would be easy to extend the proof by numerous instances, but we are satisfied that we have shown plainly already, how much the minds of the persons of whom we have spoken fall below that standard of ability which the least fastidious critics ought to adopt in estimating the pretensions of candidates for the important trust of interpreting that invaluable volume, which is the most worthy to be saved in a general wreck of profane literature. The Langhorns were unfit for the office which they presumptuously undertook and imperfectly executed ; and the editor has not in any way compensated for this by his annotations.

To enable our readers to comprehend with accuracy the present condition of the interpretation of Plutarch, it would be necessary to furnish them with copious extracts from various versions, but this our limits will not permit ; we have given, notwithstanding, one short passage from the life of Themistocles : by carefully comparing the different translations of this passage with each other and with the original, it will be easy to estimate what has already been accomplished, and how much still remains to be done. The Greek text stands thus in the first Greek edition, which Philip Junta published in 1517, and Reiske has not changed it in any respect,—

Ἐτέρη δέ τινος τῶν σρατηγῶν, ὡς ἔδοξε τι χρήσιμον διαπεπράχθαι τῇ πόλει, Θρασυνομένη πρὸς τὸν Θεμισοκλέα, καὶ τὰς ἑαυτῇ ταῖς ἐκείνη πράξεσιν ἀντιπαραβάλλοντος, ἐφη τῇ ἑορτῇ τὴν ἴσεραν ἐξίσαι, λέγησαν, ὡς ἐκείνη μὲν ἀσχολιῶν τε μεσὴ καὶ κοπώδης ἐσὶν, ἐν ἀυτῇ δὲ πάντες ἀπολαύσοι τῶν παρεσκευασμένων σχολάζοντες· τὴν δ' ἑορτὴν πρὸς ταῦτ' εἰπεῖν· 'Αληθῆ λέγεις' ἀλλ' ἐμῇ μὴ γενομένης, σὺ ἂν ἦσθα καὶ μᾶς τοίνυν, ἐφη, τότε μὴ γενομένης, πᾶς ἂν ἦτε γῦν ὑμεῖς;

In the *editio princeps*, of 1470, we read,—

'Alio quodam ex ducibus : quod aliquod in remp. beneficij consultisse videretur : elato et pro Themistocle se efferente : quod suas cum Themistoclis rebus gestis conferendas esse diceret : respondit : operosum postridie diem cum festo aliquando certasse : dicentem se negotiis ac laboribus permaximis referctum esse : in illo autem paratis rebus omnes per ocium fruerentur. Ad hæc festum respondisse : vera loqueris : sed nisi ego suissem : tu nunquam exitisses. Ita si tum ipse a vobis absuissem : ubi nunc vos omnes essetis ?'

In the year 1482, Jaconello wrote thus:—

‘ Et essendo uno fra li altri capitanei: il quale per havere facto in la repubblica qualche beneficio con superbia se avantava: dicendo chelli suoi facti erano simili ad quilli de Themistocle: Themistocle respuose che adli di passati: el di operoso et di fatica era venuto in contesa col di della festa: dicendo el di operoso che lui era pieno de affanni et de fatiche: Ma che in la festa tucti per otio et ad piacere usavano le cose che prima nel di operoso erano guadagnate: ad la qual cosa rispose el di da feste Tu dici el vero: ma se io non fosse stato: tu non sarristi: et cosei Themistocle reducendo al proposito disse: se io fosse stato absente da voi: voi tucti insieme in qual parte sarrete.’

Domenichi, with more elegance and spirit, gives the passage thus in the *Collana*, A.D. 1560:—

‘ Essendo un certo capitano molto insuperbito, perchè gli pareva d'haver fatto alcun beneficio alla repubblica, et perciò si vantava d'esser da molto piu che Themistocle, perchè diceva, che le pruove ch' egli avea fatte, non erano da paragonare con quelle di Themistocle: rispose: il giorno di lavoro venne già a quistione col di di Festa, dicendo com' egli era pieno di grandissimi negotij et fatiche; ma che il di di Festa s'atendeva a godere in riposo le cose, ch'erano state apparecciate. Dove il di di Festa gli rispose: tu di il vero, ma s'io non era io, tu non saresti mai stato. Et così dico io hora a te, s'io non fossi stato allhora con esso voi, dove sareste hora tutti voi.’

The excellent Amyot renders it in these words:—

‘ Une autre fois, comme l'un des autres capitaines de la ville, pour avoir fait quelque bon service à la chose publique, s'en glorifiait devant Themistocles, et comparast ses gests à ceux qu'il avoit faicts: Themistocles pour response luy feit un compte. Que le lendemain de la feste tensa un jour avec elle, en luy reprochant qu'il ne faisoit que travailler et avoit toute la peine, là où elle ne faisoit rien que despendre et faire bonne chère de ce que les autres avoient gaigné: Tu dis la verité, luy respondit la feste, mais si je n'eusse esté devant toy, tu ne fusses pas maintenant: Aussi si je n'eusse esté alors, vous autres où seriez vous à ceste heure?’

Sir Thomas North does Amyot out of French in this wise:—

‘ Another time one of the captains of the citie, having done good service unto the commonweale, made boast before Themistocles and compared his services equal with his. Themistocles to answer him told him a pretie tale; that the working day brauled on a time with the holyday repining against her, that he laboured for his living continually, and how she did nothing but fill her belly and spend that they had gotten. Thou hast reason, said the holyday, but if I had not bene before thee, thou haddest not bene here now; and so if I had not bene then, where had you, my maisters, bene now?’

Dryden's translator, Dr. Edward Brown, gives the apologue in this form :—

‘ A commander of the army who thought he had performed considerable service for the Athenians, boasting, and comparing his actions with those of Themistocles, he told him that the Day after the Festival reproached the Festival ; that upon her day those who were laborious and industrious refreshed themselves, but upon the Festival the sluggard and luxurious enjoyed all things : to which the Festival replied, It is true ; yet if I had not been before you, you had not been at all ; so if Themistocles had not been before you, where had you been now ? ’

This is Dacier's version in 1721 :—

‘ Un autre capitaine, qui pensoit avoir rendu quelque grand service à la Republique, s'en glorifioit auprès de Themistocle, jusqu'à oser comparer ses actions avec les exploits de ce grand homme ; Themistocle luy conta cette fable : Un jour Dame Feste, et son voisin Lendemain eurent querelle ensemble ; Lendemain se plaignoit qu'il n'avoit pas le moindre loisir, et qu'il estoit toujours accablé de travail et de peine, au lieu que Dame Feste ne faisoit jamais rien, et desbauchoit tout le monde, qui dès qu'elle paroissoit, ne pensoit qu'à se divertir et à joüir de ce qu'il avoit amassé. Feste luy respondit, cela est vray ; mais tout ce que j'ay à te dire, c'est que si je n'avois esté, tu ne serois pas : tout de mesme, adjousta-t-il, si je n'avois esté, ou en seriez-vous à cette heure ? ’

‘ Another officer,’ the Langhornes write, ‘ who thought he had done the state some service, setting himself up against Themistocles and venturing to compare their exploits, he answered him with this fable : There once happened a dispute between the Feast-day and the Day-after-the-feast. Said the Day-after-the-feast, “ I am full of bustle and trouble ; whereas, with you, folks enjoy at their ease everything ready provided.” “ You say right,” replied the Feast-day ; “ but if I had not been before you, you would not have been at all. So, had it not been for me then, where would you have been now ? ” ’

Ricard, in 1799, translated thus :—

‘ Le jour de fête, lui dit Thémistocle, eut dispute avec son lendemain ; celui-ci se plaignoit qu'il n'avoit pas un moment de loisir, et qu'il étoit accablé de travail ; tandis que le jour de fête n'avoit d'autre soin que de faire jouir tout le monde à son aise des biens qu'on avoit amassés les autres jours. Tu as raison, répondit le jour de fête ; mais si je n'avois pas été, tu ne serois pas. Moi aussi, ajouta Thémistocle, si je n'avois pas été, où seriez-vous maintenant ? ’

We see here a succession of translators, all of whom have taken the passage from some old Latin version, that was the production of a person who disregarded the pronouns *ἐκεῖνος* and *αὐτὸς*, or was possessed of a text different from any that is now in existence : they have all altered and injured the

meaning, in contempt of the proverb, ‘the day after the feast,’ which is synonymous with quiet, easy enjoyment. Dryden’s translator, it is true, has paid attention to the persons designated by the pronouns, and has given the parable a new, humane, and popular sense: we may suppose, that he, or some previous interpreter, had read, instead of $\alpha\tau\chi\omega\lambda\dot{\alpha}\nu$ $\tau\epsilon\mu\epsilon\dot{\eta}\kappa\alpha\iota\kappa\omega\dot{\alpha}\dot{\eta}\nu$, $\alpha\kappa\omega\lambda\dot{\alpha}\dot{\sigma}\alpha\omega\tau\epsilon\mu\epsilon\dot{\eta}\kappa\alpha\iota\kappa\omega\dot{\alpha}\dot{\eta}\nu$, ‘full of licentious persons and ostentations,’ and that he considered the $\sigma\chi\omega\lambda\dot{\alpha}\dot{\zeta}\nu\tau\epsilon\tau\epsilon$ as a class of men, who were usually laborious, but were allowed to rest on that occasion, and, by way of largess, to enjoy the relics of the feast. This interpretation, however, were it authorized by ancient MSS., would not convey the reproof of Themistocles so well as the received text:—‘The Day-after-the-feast disputed with the Feast-day, and said, “that that day is always full of bustle and wearisome, but on her own day all persons enjoy at their ease whatever has been previously prepared.” The Feast-day answered to this: “What you say is true; but if I had not been, you could not be.”—Yours is a day of fatigue, said the Day-after-the-feast; mine of enjoyment.’

We would endeavour, if we had not already somewhat transgressed the bounds we had set to this subject, to express in part, and to communicate at least a portion of, the earnest desire we feel to possess at last an adequate translation of Plutarch’s Lives;—a translation that should do justice to the forcible and effective, and (if it be a beauty to strike his meaning into the very heart of the reader, and to leave it there for ever) the beautiful style of the author; and that should completely unfold his full and deep sense in language agreeable and artless, and so plain, that it should be intelligible to the young in age, and to those who are always young in intellect, as far as it respects literature—the more humble classes of society. We sincerely and passionately desire such a possession, not because the golden volume is a treasury of ancient wisdom—not because it presents a vivid picture of ages—that, on account of the frequent exercise of many splendid virtues, we may justly deem heroic; but because the ever estimable Chæronean, above any other writer—we had almost said above all writers—unceasingly, and with unequalled efficacy, asserts the paramount importance of education, and the eternal, immutable necessity of sound morality. We lament to add, that we can hardly venture to expect that this precious addition to the materials of instruction will soon be made; those, whom fortune has endowed with a complete independence, rarely possess the requisite industry and learning: if a competent translator should ever be found amongst men of letters, it would be impossible

for the booksellers to afford an adequate remuneration for the application of uncommon talents to a single object for a long period of time. Plutarch enjoyed a moderate patrimony, the profits of a lay priesthood, and the lucrative offices which the friendship of a wise prince had conferred upon his favourite; and he was thus enabled to devote himself to the composition of his immortal work. Amyot, the best, because the most spirited and popular of his translators, was an ecclesiastic, amply provided with the leisure and all the aids that could cherish a studious mind; his literary labours were rewarded by many splendid benefices, and he died enormously rich. Sir Thomas North enumerates on his title-page some of the stations and honours of the excellent interpreter, 'James Amyot, Abbot of Bellozane, Bishop of Auxerre, one of the King's Privie Counsell, and Great Amner of France.'

ON THE COMMERCE OF PALMYRA.

THE paper read by Professor Heeren at the public meeting of the Royal Society of Göttingen on the 20th of November last, had for its object the Commerce of Palmyra, and was entitled 'Commercia urbis Palmyrae, vicinarumque urbium ex monumentis et inscriptionibus illustrata.' The author felt an additional incitement to continue his researches on this subject, particularly from the encouragement which an extract of his former treatise on the ancient commerce of Ceylon (vide N. 28 *Göttingische Anzeigen* 1828) has received from the Royal Asiatic Society of London, who expressed to him, through their Vice-President Sir Alexander Johnston, late Chief-Justice of Ceylon, their kind sense of his labours, offering him at the same time their aid in facilitating future historical inquiries throughout the British dominions in Asia; of which kind offer the author has already availed himself. It is part of the plan of this Journal to direct attention to investigations such as this paper contains, for the purpose of rousing our countrymen to apply their knowledge and labour to similar pursuits.

The essay before us treats of the commerce of a city whose ruins still manifest her former greatness, and whose commerce extended as far as India. The author prefaced his treatise by a short history of Palmyra. Founded by Solomon, we find her first mentioned as a city of great importance with regard to commerce in the time of Augustus-Cæsar; Appian (*De Bellis Civilibus*, v. 9.), telling us that Antonius had promised his cavalry to sack the town, in which attempt

he however did not succeed, the inhabitants having previously removed all their treasures. But it was during the three first centuries of the Christian era, under the Roman dominion, that she reached the zenith of her prosperity. Pliny (v. 25,) mentions the city as a place of great importance: her greatness and power became however still more conspicuous under the reigns of the Hadrians and Antonines, when the empire was at peace with the Parthians. It was then that the arts (chiefly architecture)* and commerce, those off-springs of peace were particularly flourishing in Palmyra, rendering her great and powerful as her monuments display; for, notwithstanding her having become included in the Roman dominion, she still remained in possession of her free constitution, as is testified to us by the inscriptions ordered by the senate and people, to whose government an imperial procurator was joined in the latter period. During the reign of Trajan, the city suffered probably very much either from war or earthquakes, or from both causes together. This we conclude from the fact that Hadrian is called her restorer. The inscriptions likewise inform us that Hadrian himself and his successors, Alexander Severus and Gordian, visited the town, and were received with great pomp and splendour. Her misfortunes under Queen Zenobia, and her destruction by Aurelian, are well known.

The remaining monuments of Palmyra all belong to the class of public edifices, † such as temples, palaces, colonnades. Amongst these, the temple of Helios, Bel or Baal, stands foremost in rank. This temple stood in the middle of a square or aula; the aula itself was surrounded by a magnificent portico, from which a colonnade of 4000 feet in length, with a triumphal arch, led to the other great edifices. It was in the aula and in the long colonnade, but not in the interior of the temple, that the monuments were placed, the inscriptions of which we are about to explain, and which prove that in Palmyra, as elsewhere in ancient times, commerce stood in close relation to religion. These monuments appear also to have formed a separate division or part of the town. No trace of any private houses has as yet been discovered amongst them. These were found

* See the Chronicle of John Malala, who gave a detailed description of the monuments erected to the Roman emperors in Syria.—Lib. X., &c.

† These monuments were first made known to the world in the year 1691, through English merchants, who brought some inscriptions to Europe, which Seller, in his History of Palmyra, undertook to explain. The chief work, however, is Rob. Wood's *Ruins of Palmyra*, published in 1753, which is the result of his own travels and researches, and contains the inscriptions themselves. The 'Voyage pittoresque en Syrie' by Mr. Cassas, contains nothing but engravings, with an 'explication provisoire,' but none of the inscriptions.

at some distance by English travellers, and appear to have occupied a wide extent of ground.

The researches of the author on the commerce of Palmyra comprehend three distinct parts, viz., the objects of her commerce, its nature, and the roads or channels by which it was conducted. As to the objects or articles of commerce, they were probably both foreign and domestic produce. Owing to her geographical position in the centre of the Syrian desert, she had to offer no other produce of her own but dates and salt, which latter article this part of the desert supplies even at the present day to the towns of Syria, and such was probably the case in former times. It may, however, be asserted with little hesitation, that this branch of trade was comparatively insignificant in proportion to her foreign commerce. 'The inhabitants of Palmyra,' says Appian (v. 9.), 'are merchants who receive the produce of India and Arabia from the Persians (the Parthians), and carry them into the Roman provinces.' The produce of Arabia consisted chiefly of incense and myrrh, that of India of spices, pearls, precious stones, and manufactures, among which those of pure silk (*holosericae*), were particularly considered as a very valuable article in Palmyra, from whence they were sent, according to Flavius Vopiscus, (*Life of Aurelian*,) as a most costly object of luxury, to Rome. We have, besides, the authority of the *Periplus of the Erythrean Sea* to show the variety of goods which India then produced.

The nature of the commerce of Palmyra was influenced by her local situation. The town being built in the centre of the desert, between two and three days' journey from the Euphrates, and from five to six days from Damascus, her trade could be conducted in no other way but by caravans, which were in fact the only channel of commercial intercourse in those regions, as they are at the present day. Palmyra must, besides, have had an abundance of camels, the breeding of that animal having been from the earliest period of history the chief occupation of the neighbouring Arab tribes, particularly in the district of Nedsched. The Palmyrenes were therefore chiefly the conductors of the caravans, and became afterwards merchants themselves, acquiring from their own commerce the great wealth of which Pliny and others tell us. According to Flavius Vopiscus, the number of camels belonging to Palmyra must have been immense. When Zenobia could no longer maintain herself in the town, she attempted her escape on dromedaries, but was overtaken by the cavalry of Aurelian. This at once proves that she possessed a regular stud of camels. It is also generally known how much

danger and insecurity the commerce in those regions had to contend with, owing to the pillaging habits of the roving Bedouin tribes. 'It is curious,' says Pliny, 'that these tribes should be robbers and traders at the same time.' Travellers were then, as is still the case, under the necessity either of purchasing a safe conduct from them, or of being accompanied by numerous armed men; both expedients were expensive. At Palmyra, it was the town herself that had to provide for the safety of her merchants during their journey through the deserts. But sometimes those expenses were defrayed by private persons, such as magistrates, or the directors of the caravans, from their own private property, and the grateful city erected to them for such acts of patriotism, monuments or statues, with inscriptions, in public places, either in the aula of the temple of Helios, or in the long colonnades. To these testimonials of public gratitude we are indebted for some further discoveries relating to the nature of the commerce of Palmyra. The inscriptions copied in Wood's *Ruins of Palmyra* amount to twenty-seven, thirteen of which are in Palmyrene characters, * with a Greek translation, and fourteen in Greek only; they are engraven on the pedestals of the shafts of those columns which were erected in the aula and the long colonnades. Four inscriptions, of which three are in Greek, relate to commerce, and are those commented upon by the author. The following is the latin translation.

I. *Ruins of Palmyra*, No. XVIII., *in the Court of the Temple of the Sun*.—Senatus Populusque Palmyrenus Septimium Orodem, optimum Procuratorem Ducenarium Augusti, qui oleum curavit donandum Metropoli coloniae quique privata impensa et suo sumtu commeatum mercatoribus iter commune facientibus præbuit; et a negotiorum Præsidibus amplum testimonium adeptus est; fortiter et cum laude militantem; et ædilem ejusdem metropolios coloniae plurimas etiam opes ex privato impendentem; ideoque placentem eidem Senatui populoque; et nunc magnifice symposiarchum in sacrificiis Jovis Beli honoris erga coluit.

This Septimius Orodes was a ducenarius or procurator of the Emperor, and at the same time ædile of the town (*ἀγρονόμος*). Palmyra is here called Metropolis, as being the chief town of the district, and also Colonia, from her having

* The Palmyrene inscriptions, as well as the Greek, have been explained by Eichhorn, in the *Commentationes Reg. Soc. Gott.*, vol. vi. The Palmyrenian alphabet was deciphered by Barthelemy.

enjoyed the *jus coloniarum* since the reign of Caracalla. The acts for which the name of Orodes was mentioned with such distinction were, firstly, for his having presented the town gratuitously with oil, probably for the use of the public baths, as the consumption of this article must have been very great in so populous a town. Secondly, For his having defrayed out of his own private property the expenses attending the travelling companies of the merchants ($\tauὰς συνοδίας τὰν ἐμπόρων$). This clearly refers to the passage of the caravans, and the expense required for the security of their journey. Orodes had a right to claim the expense from the town, but he preferred paying it out of his own property. Thirdly, He obtained on these grounds, and also for the courageous defence he displayed (probably at some attack on the caravans), a certificate from the heads of the merchants ($τοῖς ἀρχεμπόροις$). From this we conclude that the merchants formed a kind of corporation with elders at their head. Fourthly, He held at the same time the office of a Symposiarch at the festival of Bel or Helios, which he very probably fitted out in a splendid manner. This service in the religious rites being acknowledged, together with objects merely relating to commerce, shows the connexion which existed between commerce and religion in those times. Fifthly, For all these services, the senate and the people, as a token of public gratitude, erected a monument to him in the great aula of the temple of Helios, showing how important those services were regarded.

II. *Ruins of Palmyra, No. X., in the long Portico.*—Julium Aurelium Zebidam, Mozimi filium Zebidæ nepotem, mercatores qui cum eo descenderunt ad Vologesiac nundinas ($Ολογεσιαδα ἐμπορίαν$) elegerunt astorubaida, virum iis gratissimum cultus gratia a. 558 Seleucid. 246 of our Era.

This inscription refers again to a traffic carried on by caravans from Palmyra to Vologesia, a town of some importance near the Euphrates. Zebidas was elected their Astorubaida (a word of Palmyrenian idiom), signifying probably a leader or captain of the caravan, which, the assertion that he made the journey *with* them, appears to confirm. But the author being, however, in doubt, whether it might not signify some honorary title conferred upon him by his companions at the end of their journey, addressed himself to his worthy colleague Professor Ewald on this subject, and obtained from him immediately the following satisfactory explanation.

‘As regards the title $\alphaσθωρονβαιδα$, I have no doubt of its Semitic etymology. The Arabic word بادى baida, the desert, is

easily discovered in the second part of the name *βαιδα*; the first part *ἀσθωρον* may appear doubtful at first, as the Greeks write for the letters *ב* and *ת* their *σ* without any discrimination. If, therefore, the *σ* here stands for *ת*, the name would signify *protection of the desert*, *κράτος* or *κράτος* denoting protection, but it appears more correct to derive it from the Hebrew *נָשָׁר* a leader or captain to whom the management of affairs is entrusted, and to read *נָשָׁר* or *נָשָׁר*. The honorary title *astorubaida* may therefore be explained by *Præfector deserti.*

The title was conferred upon the leader of the caravan after the happy termination of the expedition; perhaps just in the same way as the imperator obtained his title from his legions. Having performed his duty with zeal and success, the caravan under his guidance acknowledged to him their thanks by an inscription, probably also by a statue. This monument was erected in the year 246 of our era, consequently in the reign of the Emperor Philippus, and twenty-seven years before the destruction of Palmyra, under Aurelian.

III. *Ruins of Palmyra, No. V., in the great Aula.*—*Nasae Allati filio Synodiarchae mercatores, qui cum eo descendebant ab Euphrate et Vologesia, honoris et gratitudinis causa hanc statuam posuerunt a. 453.* (A. Chr. 141.)

From this inscription, we learn that the statue, with the inscription on its pedestal, was erected by a caravan, in honour of their leader or synodiarchas, of the name of Nasas; 2dly, that this caravan arrived from Vologesia, near the Euphrates, in the year of Chr. 141, consequently, under the reign of Antoninus Pius; and its erection in the temple of Helios affords to us again a convincing proof of the connexion between commerce and religion.

IV. *Ruins of Palmyra, No. XIII., in the long Portico.*

The Greek translation of this inscription is mutilated, but it has been preserved entire in the Palmyrenian, and was translated by Eichhorn in the Comment. Reg. S. Gotting. vol. vi. p. 114. Though but a short one, this inscription is, however, very curious, as we learn from it that the Jews participated in the caravan trade of Palmyra in common with the other inhabitants. The following is the translation:—
'Haec est Statua Julii Aurelii Schalmalat, filii Malae, Hebrei, ducis Societatis peregrinatorum, quam in ejus honorem erexit Senatus Populusque Palmyrenus quod adduceret talem societatem (*συνοδίαν*). Gratis solebat itinera facere. A. (Seleucid.) 569.' (258 A. Ch. under the reign of Valerian.)

Hence it appears (1.) that this statue was erected to one

Julius Schalmalat, a Jew; and that at Palmyra, which was originally a Jewish colony, the Jews not only participated in the commerce of the town, but enjoyed such consideration that even public honours were conferred upon them *. (2.) That this was done on the ground of Schalmalat having been the leader of the caravan, *dux societatis peregrinatorum* (*ἀρχέμυνος*), whom he conducted to Palmyra at his own expense, without demanding any indemnification from the town. And from the expression *solebat* *hacce itinera gratis facere*, we may conclude that he did this several times, and proved himself a benefactor of the town. (3.) That the statue with its inscription was erected to him, not by the merchants, but by the senate and people of Palmyra. It was, consequently, a sacred public monument, and proves the importance in which the regularity of this trade, and the happy arrival of the caravans, were held in Palmyra, the town proclaiming those persons benefactors of the community who did this service at their own expense, without any charge to the city. These inscriptions, then, prove, independently of the importance of the caravan trade itself, its close connexion with the religious rites; Helios having been the tutelar deity both of the town and commerce. At the same time, an attentive examination of the locality of the constructions consecrated to that deity, leads us to infer from it another fact, which has indeed so high a degree of probability in its favour, that we cannot let it pass unnoticed, though we have not such historical evidence for it as for the other facts above mentioned.

The temple itself was built in the middle of a square, eight hundred feet in length on each side, which space is occupied at the present day by the Arabs, and covered with their huts. This square is again surrounded by a portico, behind which there were cells constructed, each side having a double row of fifty-four columns, at the shafts of which we see the pedestals with inscriptions. The only entrance was through a magnificent gate, behind which there were two basins eight feet deep (according to Cassas), with a flight of steps leading to them. This square is still called by the Arabs the Yard of the Camels, and travellers still alight there on their arrival. Is it possible it could have been designed for any other purpose in former ages? The whole construction is perfectly similar to a large cara-

* The triumph of Aurelian (after the destruction of the town) shows in some degree by how many different nations Palmyra was peopled, which, in fact, could not be otherwise in a great commercial town. Flavius Vopiscus, in *Aureliano*, c. 34, mentions Blemyes, Axomitae, Arabes Eudæmones, Indi, Bactriani, Iberi, Saraceni, Persae, and others.

vanserai ; its square form, the porticos with the cells behind for the use of the travellers, the two basins with fresh water, and the extensive area (affording sufficient space for the camels and merchandise),—all denote the use for which these buildings were destined. And from the fact of the monuments with their inscriptions, placed there by the town or the caravans, as a token of gratitude to those leaders who defrayed the expense necessary to secure the safe conduct of the travellers, may we not conclude that we see here the great caravanserai of Palmyra, whose commerce found its security under the protection of the temple and the tutelar deities of the town ? Probably, then, the adjoining portico, of nearly four thousand feet in length, with its magnificent gate and its inscriptions and monuments, was the meeting-place of the merchants and traders,—a sort of exchange, somewhat superior to those of Hamburg and Amsterdam. But as in historical researches we should always separate facts from conjecture, so we will proceed here. As an instance what great wealth the merchants of Palmyra had accumulated from their commerce, Firmus of Seleucia (in Syria) may be mentioned :—

‘ Of his riches,’ says Flavius Vopiscus, ‘ much is told. The walls of his house were covered with glass. So large was his stock of Ægyptian papyrus, that its value could, on his own assertion, support a whole army. He had very extensive commercial transactions with the Blemyes (a trading nation in Nubia) and the Saracens or Arabs ; he also frequently sent vessels to India.’

That this Firmus could not be the only wealthy merchant of Palmyra is clear from the great number of magnificent buildings in the town and tombs in the environs.

We have still to trace the roads by which the commerce of Palmyra was conducted. To discover these channels of the commerce of antiquity is one of the most important objects of historical research ; for they were not merely the channels of commerce, but also those of the religions, laws, and civilization of mankind. In the investigations relating to the commercial roads of Palmyra, we must look to the testimonies of Appian and Pliny, according to whose authority the merchants of Palmyra had a great share in the commerce of the East with the West, conveying the produce of Arabia and India to the Romans and Parthians. This shows that the high roads branched out in the directions of the south, east, and west. The roads to the south communicated with Arabia, and were probably the most important. Pliny, in his *H. N.* vi. 32 (or 28 in some edits.), fortunately has given us some key to it. He says :—

‘ Nabataei oppidum includunt *Petram* nomine in convalle paulo minus duorum milliarium amplitudine, circumdata montibus in-

accessis. Huc convenit utrumque *bivium*, et eorum qui ex Syria Palmyram * petiere et eorum qui ex Gaza veniunt.'

Of the precise geographical position of the ancient Petra we are no longer in any doubt ; it is a place now called Karrak, thirteen miles (German) to the south of the Dead Sea, in Arabia Petraea. Laborde, in his recent travels, has described the spot exactly. It is formed by nature for a place of entrepôt. A narrow path leads through rocks to a plain of moderate dimensions, which is surrounded by inaccessible mountains. In this plain the ancient Petra was built, the greatness of which is still attested by its ruins. According to Diodorus, it was already, as early as the time of Alexander, the chief commercial town for the trade of Arabia. From the statement of Pliny, we learn that it was at Petra that the caravans coming from Arabia separated, some taking the road leading to the left to Gaza, others the road to the right to Palmyra. This town, then, was the market where the merchants of Palmyra found the produce of Arabia-Felix. On the other hand, we have the instance of Firmus, who participated in the sea trade to India, probably from the port of Myos Hormos, on the gulph of Arabia : this trade must have been very flourishing ; Strabo himself speaks of one hundred and twenty India trading vessels from that port. Another part of the commerce of Palmyra branched towards the east, to Seleucia and Ctesiphon on the Tigris, the capital towns of the Parthian empire, Babylon having already ceased to exist. That those towns were the chief customers of Palmyra there can be little doubt, since Pliny complains, speaking of the Parthians and Romans, that the Indo-Arabic trade absorbed all their wealth. Of the roads to those towns two of the inscriptions above-mentioned give us some interesting information ; they distinctly mention the town of Vologesia, near the Euphrates, as being the last stage of the caravans coming from Palmyra. This town was founded in the vicinity of ancient Babylon, by Vologeses I., not long before Pliny's time (as he expresses by the word 'nuper,' in his H. N. vi. 30. or 26.), for the purpose of commerce, where the great fairs for the caravans of Palmyra were to be established. Probably the road went in a straight line through the desert ; and not so far north as Amathusias, which was the case in Strabo's time ; and as Vologesia was but seven or eight miles (German) distant from Seleucia, it must have been perfectly fit for such a destination as a fair, where the merchants could provide themselves with the produce of Eastern Asia, which they carried from thence to the West. Probably, then, those trading cara-

* Qui Syriae Palmyram, some eds.

vans did not proceed farther east; as the direct trade of Tyre appears to have had similar boundaries within those countries where the Semitical idioms prevailed. The western roads communicated naturally with the towns and ports of Syria and Phœnicia; and as we find in this direction the temples of Helios at Emesa and Heliopolis, can we doubt that these towns, together with Damascus, for the protection of whose commerce the Romans had already taken measures ever since the time of Pompey, were actually the commercial stations on those roads?

The recent discoveries of Seetzen and Burckhardt in their travels show that the eastern parts of Palestine, the Decapolis, on the other side of the Dead Sea, likewise contained towns which had yielded to Palmyra but very little in greatness and splendour. With a surprise similar to that of the British travellers who first discovered the ruins of Palmyra, did these latter look on the ruins of Gerasa, Gadara, and Philadelphia. Those of Gerasa (Djerasch) have been described by Burckhardt: he found there temples, colonnades, one large theatre, and a smaller one. The ruins of the two other towns are said to be but little inferior. In inquiring, therefore, how these towns* at the borders of the desert could become the seats of wealth, splendour, and luxury, it can only be explained by the same causes which made Palmyra so distinguished a place. Can we doubt that, in regard to them, the words of the prophet had been fulfilled, 'a host of camels will cover thee; the dromedaries from Midian and Ephah†?'

The period of their prosperity, judging from the style of their architecture, was the same as that of Palmyra, namely, the age of the Antonines. A few mutilated inscriptions found there have still preserved us the names of these great rulers. They, however, stand there but as silent witnesses; and as it was the object of the author to found the present treatise only on incontestable and irrefutable evidence, he could not enter into any further investigations as regards those latter discoveries.

SALLUST'S CATILINE AND JUGURTHA.

1. *The Bellum Catilinarium of Sallust, and Cicero's four Orations against Catiline; with English Notes and Introduction: together with the Bellum Jugurthinum of Sallust.* By the Rev. W. Trollope, M. A. London: Rivington, 1830.

* These towns were the stations of the commerce of Arabia, on the road from Petra to Palmyra.

† Isaiah, ix. 6.

2. *C. Crispi Sallustii de Catilinæ Conjuratione Belloque Jugurthino Historiæ. Animadversionibus illustravit Carolus Anthon, Lit. Græc. et Lat. in Col. Coll. N. E. Prof. Adj. Novi Eboraci. Sumtibus G. et C. et H. Carvill, MDCCCXXIX.*

THE writings of Sallust do not afford a good text-book for a beginner, nor, indeed, do they possess very great value in any point of view. In all the higher qualities of an historian he is very deficient, and as a moralist or philosopher altogether contemptible. Still, if it be the pleasure of any schoolmaster or parent that a boy should read this author at or near the commencement of his studies, it is, of course, desirable to have a correct edition adapted to the purposes of instruction. Such an edition it seems to have been Mr. Trollope's intention to publish; and he has done well in adding to the Catiline and Jugurtha of Sallust the four Catilinarian orations of Cicero. We have also before us an American edition of the historian, likewise published for the use of schools. Why both these editors should have omitted the fragments of Sallust we can see no good reason: they would have required only a few additional pages, and some of the fragments are more valuable as historical documents than any equal portions of the two treatises they have published.

We believe we shall be able to give the reader a correct notion of the nature and value of Mr. Trollope's edition without trespassing largely on his time. In the introduction we find 'an elementary praxis, which may serve as a guide in the essential exercise of parsing.' The passage selected for analysis is the first part of the fifth section,—Lucius Catilina, natus nobili genere fuit, &c.; and the praxis commences thus:—

'Lucius (2 decl.) Catilina (1 decl.) pr. n. Nominative case to the verb fuit.—Natus, part. perf. of vb. dep. 3. conj. nascor nasceris, or ere, natus sum, &c. [Rule, Verba in or, &c.] Nomi. sing. masc. to agree with Catilina. [Rule, Adjectiva, participia, &c.]—Genere, noun subst. 3. decl. from genus, cris. [Rule, Est neutrale, &c.] Abl. sing. governed by natus. [Rule, Natus, prognatus, &c.]—Fuit, verb. subst. from Sum es fui, &c. [Rule, Sum, fui, habet.]' and so on for four pages of precisely the same character. This praxis, we are given to understand, will be decisive in its effects upon the pupil's intellect, and he is accordingly dismissed, as follows:—

'Here, then, we may leave the scholar to work for himself; and, trusting that he will find no great difficulty with the occasional assistance afforded in the notes, let him be advised to make out every word with diligence and accuracy.'

To the uninitiated the mystical symbols of Mr. Trollope may appear somewhat obscure; and we had, therefore, intended to give a specimen of an English praxis, taking the sentence we have just quoted for the subject of our analysis. We had proceeded as far as the word 'trusting; ' thus :— 'trusting, part. pres. vb. act. to trust, I trust, you trust, or thou trustest, &c. agrees with *we* understood. [Rule, adjectives, participles, &c.] *We*, pron. pl. nom. from *I*, &c. But when we came to apply the Rule 'Verb, personal,' &c. we were at a stand-still, not being able to find the verb to which the pronoun refers. We regret this the more, as an engine so effectual for the explanation of the Latin language must, of course, afford great assistance towards an accurate knowledge of our own.

Like nearly all our English editors of Greek and Latin books for schools, Mr. Trollope seems wholly indifferent about the correctness of his text; and, in the case of Sallust, this is the less excusable, as Cortius has, in his edition, carefully reported the readings of the various MSS. Had he but copied the text of Cortius, without examining his authorities, we should have had no cause to complain; but, unfortunately, a certain text has established itself in the school-books of this country, without much regard to authority; and to the orthodox errors of this Anglican text Mr. Trollope persists in adhering. The first word of the Catilinarian war is an unimportant specimen of this inattention. Cortius tells us that all the best manuscripts have *omnis*; but such evidence has no weight with our editor, when he finds in the Eton Grammar that *omnes* is the form of the accusative plural. Again, at the end of the first chapter, ' *Ita utrumque, per se indigens, alterum alterius auxilio veget*' is the reading given by Mr. Trollope, with the following note :—' Although the word (*veget*) is very rare, there is no necessity for altering it into *eget*, as some have proposed. In that case *auxilio* would be the governed ablative. [Rule, *fungor*, *fruor*, &c.] It is now the ablative of the cause.' The reader would naturally infer from this that the manuscript reading is *veget*, and that *eget* is a conjectural alteration. The fact, however, is precisely the reverse, as appears in the note of Cortius. ' *Gruteri, Rivii, Wassii, nostrorum et forsitan omnium qui ubique dantur MSS. hæc (eget) est lectio, quam primus Palmerius immutavit veget loco eget substituendo.*'

In reference to the notes we will first observe that a considerable number of them are of the same nature as the praxis in the introduction; thus, in the second page alone, we find—

' Rule : *Fungor*, *fruor*, &c. ' Rule : *Verba infiniti modi*, &c.

‘ Rule : Verba imperandi,’ &c. Equally valuable, and almost equally common, is the employment of the terms *Hendiadys*, *Tmesis*, *Paraphrasis*, *Ellipsis*, *Hypallage*, *Latinism*. In the third place we are indebted to Mr. Trollope for a number of parallel, or what are intended to be parallel, phrases and sentiments from *Terence*, *Milton*, *Apuleius*, *Ammianus Marcellinus*, *Tacitus*, *Seneca*, *Statius*, &c.

The historical and geographical articles consist almost entirely of simple references to *Lempriere*. Thus :—*Cato*, see *Lempriere*; *Scipio*, see *Lempriere*; *Carthago*, see *Lempriere*; *Fabia Terentia*, see *Lempriere*.

As we have already stated pretty openly our opinion of this work, we need only refer the reader to our second number ; and it happens fortunately that *Cato* and *Scipio* were two of the very names particularly examined. Besides, little advantage is derived from a reference to *Lempriere*, when the very article to which we are referred is scarcely of greater extent than the words necessary to express the reference. Mr. Trollope, for instance, gives us a note on *Fabia Terentia*, directing his reader to consult *Lempriere*. Now, the article in the *Dictionary*, when found, contains just one single line. Mr. Trollope would not have been charged with plagiarism had he copied the eight words which constitute the biographical notice in the *Dictionary*, while his reader would have been a gainer in both time and paper.

The few historical notes of his own with which Mr. Trollope has favoured us are, indeed, worthy of *Lempriere*. By way of adding, we suppose, to the scenic effect of the fourth oration against *Catiline*, he gratuitously supposes that *Terentia*, with her son and daughter, were present ‘ to ascertain the course which the proceedings in which they were so nearly interested were likely to take.’ Is Mr. Trollope aware that the little *Marcus* was at this period only one or two years of age ? We have said that he *gratuitously* introduces them into the senate ; but he does so not only without, but against evidence. To prove this we need go no further than the very passage to which he appends the note in question,— ‘ *Nec tamen ego sum ille ferreus, qui fratri carissimi atque amantissimi praesentis moerore non movear, horumque omnium lacrimis, a quibus me circumserum videtis : neque meam mentem non domum saepe revocat exanimata uxor, abjecta metu filia, et parvulus filius.* ’

In page 5 there is an historical note on the *Aborigines*, which we cannot refrain from quoting in part. It will speak for itself—‘ According to *Cic. Tusc. Quaest. 1.*, the old poet *Ennius* calls them *Casci*, a name which is thus explained by

Servius in his commentary on Virgil: *Latium* dicitur, quod ibi *latuerint* incolae; qui quoniam in cavis et occultis montium *caventes* sibi a feris belluis habitaverint *Casci* vocati sunt, &c.

As a specimen of the notes connected with Roman customs we extract the following:—‘The Romans had a greater and less coin, called *sestertium* and *serstertius*, the former of which contained 100 of the latter, and was equal to about 7*l.* 16*s.* 3*d.* of our money.’ And, again, ‘The *sestertius* was a quarter of a denarius (7*½d.*), equal in value to two pounds and a half of brass.’

If a second edition of this work ever be called for, we request the editor to favour us with his authority for the following points:—First, that the *sestertium* (value *about* 7*l.* 16*s.* and *threepence*) was a coin; secondly, that a *hundred** *sestertii* were equivalent to a *sestertium*; thirdly, that a *sestertius* was worth a fourth part of 7*½d.*, and yet of equal value with two pounds and a half of brass.

In page 37 we are informed that *liberti* means ‘freedmen, as distinguished from the *ingemui*, or free-born citizens of Rome;’ and that ‘their sons were called *libertini*.’ Now, the American editor assures us that *libertus* is the correlative of *patronus*, and that *libertini* is opposed to *ingenui*; that *Tiro*, for instance, belonged to the class of *libertini*, being the *libertus* of *Cicero*. Mr. Trollope, on further inquiry, will find reason to agree with Mr. Anthon.

A few remarks on those notes which are explanatory of construction, and we have done. In page 82 (and by the time the pupil arrives at this stage of the work, be it observed, he will have read the whole of the *Catiline* and more than two of the orations of *Cicero*) there is given this note:—‘*Negavi me esse facturum.* The infinitive mood is used after an accusative case, the conjunction *that* being understood in the English. [Rule: *Verba infiniti modi, &c.*]’ Had any note upon this usage of the Latin accusative been necessary, it would have been more judicious to have placed it at the outset of the *Catiline*, after the words *qui sese student prae stare*. Yet Mr. Trollope, omitting it in this first passage, takes care to lose no opportunity of giving the same valuable note in the middle of his book. See p. 15, n. 1; p. 20, n. 3; p. 21, n. 5; p. 30, n. 3; p. 31, n. 2; p. 33, n. 4, &c. This, however, is merely a waste of paper. There are too many notes where the pupil is likely to be misled by the critical remarks of our editor. Thus in the seventh chapter of the

* ‘*A hundred*’ appears to be a mistake of the press, but as the whole passage is so inexact, it seemed necessary to extract it entire. Typographical errors in Mr. Trollope’s book are very numerous.

Catiline, the construction—‘Eas divitias, eam bonam famam magnamque nobilitatem putabant,’ we are told, may be thus supplied, ‘eas *res* esse divitias, eam famam esse bonam famam, &c.’ This is one instance among many of a common practice with a certain class of grammarians. If they meet with a feminine adjective which presents to them any difficulty, they can always evade the difficulty by supposing *res* to be understood. If the adjective be in the neuter, it is equally easy to supply *negotium*. With the masculine the case is otherwise. They are then wholly at a loss. As to the passage here in question, the construction in respect of gender corresponds to the *Hoc opus, hic labor est*, or the *Is locus urbis erit; requies ea certa laborum* of Virgil. See also Zumpt’s Grammar, § 66. 7, and Livy: *Sempronio datae legiones duae (ea quaterna milia erant peditum)*.

Again, in the 5th chapter of Cicero’s second oration, ‘Sed si, omissis his rebus omnibus quibus nos suppeditamus, eget ille—senatu—equitibus Romanis—populo—urbe—aerario; si, inquam, his rebus omissis, ipsas causas contendere velimus, &c.’ Mr. Trollope gives this comment: ‘*Omnibus*—this adjective does not agree with *rebus*, but is the ablative after *eget*, and *senatu, equitibus, populo*, &c., are in apposition with it [Rules: *Fungor, fruor, &c. Duo substantiva, &c.*].’ That which has here misled Mr. Trollope, has often misled other editors, and has indeed frequently led to the corruption of a text. We have an example in Liv. xxiv. 2, where there can be little doubt that the true reading is ‘*quam Bruttios obpugnare, Poenos nec probare nec juvare eam obpugnationem appareret*.’ It is indeed almost always the practice of Livy, when contrasting the conduct, feeling, or situation of two parties, to omit the conjunction, which perhaps is sometimes required in the English translation. Thus the present passage might be rendered: ‘If, putting out of our consideration all those resources in which *we* abound, *while he* is altogether deficient, &c.’ Other instances of constructions misunderstood by our editor may be found in Cat. c. 31, n. 4; c. 30, n. 6; c. 43, n. 5, &c.

We have already mentioned one instance of a practice pretty common in these notes, we mean the explanation of grammatical idioms, by the supposition that certain words are understood. This principle plays a very important part in Mr. Trollope’s *praxis*. For example, c. 4, n. 2, ‘*absolvam—historiam* must be supplied as an accusative;’ c. 6, n. 1, ‘*tentare*—it is generally understood to be governed by *incipiebat* understood [Rule, *Ponuntur interdum, &c.*] Perhaps the Latins *understood nothing*, but merely adopted the form as more *smooth* and *elegant*;’ c. 19, n. 6, ‘*Sunt qui*

ita dicunt—Quidam or alii is understood ; c. 23, n. 5. *Huic homini non minor vanitas inerat quam audacia.* ‘ *Subauderat* [Rule : *Est pro habeo, &c.*] ; c. 39, n. 1. ‘ *Subauderent* ; c. 40, n. 5. *Orare* ‘ *Subauderat*. *incipiebat.*’ What with all this understanding and subauding, we cannot but think that Mr. Trollope’s pupils are likely to fall into the same predicament as the poor Romans themselves, and at last to understand nothing.

We may now conclude our remarks on this edition ; nor indeed should we have trespassed so far on the time of our readers, but for the consideration that in disposing of Mr. Trollope’s *Sallust*, we have saved ourselves perhaps from the necessity of examining a number of other school-books which have issued from the same source. These books may, indeed, possibly be better than the one before us. The reader, however, now knows some of Mr. Trollope’s failings as an editor, and he can, by a very cursory examination of his other publications, determine how far these failings are common to them. Among the works advertised by Messrs. Rivington, there are to be found the following :—

1. *The Iliad of Homer*, chiefly from the text of Heyne, with copious English notes, &c., by the Rev. W. Trollope, M.A., late of Pembroke college, Cambridge, and one of the masters of Christ’s Hospital. 2 vols. 8vo. 1*l.* 4*s.*

2. *Pentalogia Græca*, &c. *Notis Anglice scriptis illustravit*, &c. Gulielmus Trollope, A.M. 8vo. 14*s.*

3. *Excerpta ex Ovidio*. With English notes and an introduction, containing rules for *Construинг*, a *Parsing Praxis*, &c., by the Rev. W. Trollope, M.A. 12*mo.*

Mr. Anthon’s edition commences in rather a formidable manner, with a Latin title-page, a Latin dedication, and a Latin preface. As these were the first published specimens of American Latinity that had ever fallen under our notice, we were tempted to read them ; but the perusal has only confirmed our previous impression, that all such accompaniments to a work, so far as they are at all necessary, should be written in the vulgar tongue. In saying this, we mean no special dispraise of Mr. Anthon’s Latinity. Though deficient in simplicity, though disfigured with poetical phrases, and occasional solecisms, it will not suffer from comparison with many productions in the same language which issue from the British press, sanctioned too by names high in the learned world.

Passing over, then, these exterior ornaments, we proceed to the work itself, which consists of the *Catiline* and the *Jugurthine* war, with a very large appendix of notes, the extent of which will be readily estimated, when we state that

the text occupies 132, and the notes 254, pages. And if we take into consideration the size of types, this difference will be materially increased.

The text is for the most part copied from that of Cortius, which, being almost invariably founded on the best manuscript readings, is justly deserving of value. In those passages where the American editor has ventured to differ from Cortius, though we occasionally agree with him, we think on the whole that he has been too indifferent about the support of MSS., and has attached more than the due value to certain undefined notions of elegance and vigour of style. Thus in the first chapter Mr. Anthon agrees with Mr. Trollope in the reading *veget*, contrary, as we have already said, to every manuscript. His note is this:—‘An archaism for *viget*. . . . As Dahl well remarks *indigenus eget* is a frigid expression.’ This criticism would be more valid, were the two words in the original in immediate *juxta-position*.

In the 14th chapter of the Jugurthine war, towards the close of Adherbal’s speech, there is a passage where Cortius has destroyed the sense by a reading of his own, totally unsupported by authority, and in this he is followed by Mr. Anthon.

‘They tell you,’ says Adherbal, ‘that my complaints are mere fictions of my own, that I represent myself as expelled from my kingdom, when I might have reigned there undisturbed. Would that I could see the man who has been the cause of all my misfortunes playing the hypocrite as I am; yes, the sufferings of my father, my brother, and myself, would be then sufficiently avenged.’

Utinam illum . . . eadem haec simulantem videam. Ne ille . . . gravis poenas reddat. The reading of Cortius, in spite of every MS., and contrary to the idiom of the language, is *reddet*.

It may be here worth while to observe, that nearly all our grammarians, translators, and editors, are incorrect in the translation of the subjunctive mood, after such conjunctions as *utinam, si, quasi*. Dr. Crombie, in his *Gymnasium* (vol. i. p. 51.), and Zumpt, in his grammar (Mr. Kenrick’s translation, p. 330.), have given a pretty correct view of the difference between the Latin and English idioms. Thus to take an example from the latter: *Tu si hic sis, aliter sentias*, if you were in my situation, you would feel differently. Plautus has the same phrase in a different tense: *Tu si illic esses, aliter sentires*, if you had been there, you would have felt differently. This distinction, simple as it is, is more than once neglected by Mr. Anthon. We have three instances in the 31st chapter, *aequo animo paterer, nisi misericordia in perniciem casura esset, i. e.*, ‘Would end in your own ruin,’

says Mr. Anthon, instead of 'would have been likely to end.' At the beginning of the same chapter: *Multa dehortantur a vobis, Quirites, ni studium reipublicae omnia superet.* Mr. Anthon's note is: The usage of *dehortantur* for *dehortarentur* will be found explained, &c. He should have said, for *dehortentur*. So again: *Si tam libertatis curam haberetis, &c.*; and in c. 14, *Si ad impetrandum nihil caussae haberem . . . tamen erat majestatis Romani populi.* This last Mr. Anthon translates: 'Still it would be,' instead of, 'still it would have been, &c.' Even with the indicative mood, the use of *si* is not generally understood by our modern editors. Mr. Anthon's preface will afford an example. '*Si utilitatis fructum hi praebeant igitur, quibus nunc perfunctus sum laboribus, magnopere gaudebo; votis fruiturus felicissimiis, si eruditorum quoque demereantur suffragia.*' We would suggest that the two subjunctive moods might be advantageously exchanged for futures of the indicative.

But, to return to the examination of the text, we recollect two other passages, where we have always thought Cortius somewhat injudicious. In the seventieth chapter Bomilcar, writing to his fellow-conspirator, reminds him, *Jugurthae exitium adesse; ceterum, suane an virtute Metelli periret, id modo agitari.* This is the reading of Cortius, which is repeated by Mr. Anthon. But that such is the correct order of the words, we cannot believe; for certainly the common arrangement in clauses of this kind is such, that of the two opposed words one precedes *ne*, and the other follows immediately after *an*. We would contend, therefore, either that *fraude*, or some equivalent word, has disappeared after *suane*, or else that *virtute* and *Metelli* have been transposed.

The other passage is in c. 101: *ratus ex omnibus aequa aliquos ab tergo venturos.* This is the reading of the MSS. and of Cortius, who refers *aequa* to *ab tergo*, and translates it *gerade von hinten zu, directly in the rear.* Will the position of the word *aliquos* allow us to connect *aequa* with *ab tergo*? and, secondly, is there any other instance where *aequa* possesses the power here assigned to it? Mr. Anthon, with the Bipont editor, gives as the meaning: '*that some of them certainly, no matter which.*' This, again, is a translation of *aequa* for which we know no authority. Gronovius's conjecture, *utique*, would justify such a translation, and we have little doubt that his conjecture is right.

In c. 111. *Denique regi patefacit, quod polliceatur, Senatum et Populum Romanum non in gratiani habituros*, is translated 'as regards any promises he *may* make,' &c. It should have been, with regard to the offer just made. Sulla refers

to the specific offer of Bocchus stated in the preceding chapter, *Arma, viros, . . . sume, utere*; and again, *Ego flumen Mulucham non egrediar neque, &c.* The subjunctive mood appears to have misled Mr. Anthon.

In c. 85, the phrase *ex animi sententia* is thus translated: as *I am well persuaded*. Cortius has shown in his note, that this expression is merely an abbreviated form of an affirmatory oath. It might be completed in this way: *Ita omnia mihi ex animi sententia eveniant ut*, followed by some *indicative* mood. The same phrase occurs in Livy, xxii. 53; and many other passages. See Drakenborch's note. The word *ferox*, again, is a source of some difficulty to our editor. Sometimes it is translated *unsubdued*, then *violent*, then *stern*, &c. We believe that the quality expressed by this word is a full confidence in one's own powers, a meaning which will be found to accord with the several passages we refer to, better, perhaps, than any of the three translations given above.

A large portion of Mr. Anthon's notes consists of translations of short clauses or single words, in many of which more attention seems to have been paid to a supposed elegance of language, than to the precise meaning of the original. Thus we have:

Jug. c. 4. *furtim et per latrociniu*, by private intrigue and unfair practices.

Cat. c. 52. *armis*, martial prowess.

Jug. c. 91. *coercitum*, capable of being kept in subjection.

Cat. c. 52. *cedunt*, eventuate.

Jug. c. 76. *infectum*, impracticable.

Jug. c. 72. *quieta*, given to undisturbed repose.

Cat. c. 10. *materies*, the germ.

Cat. c. 48. *animos reficeret*, might reanimate the courage.

Cat. c. 33. *nemo bonus*, no man of spirit.

Jug. c. 14. *emori*, a speedy death.

Cat. c. 20. *emori per virtutem*, bravely to encounter a speedy death.

Jug. c. 31. *summam gloriam*, the highest civil employment.

Jug. c. 15. *famosam impudentemque*, barefaced and shameless.

The following note on the fifty-second chapter of the Jugurtha is not altogether intelligible:—

‘*Adverso colle*, “up the hill.” *Secundo colle*, down the hill. . . . In the phrase *secundo colle*, the term *secundo* retains its primitive meaning of following from *sequor*, of which it is properly a verbal: thus, *secundo colle*, literally, the “hill following;” i. e. [the descent

of the hill following after as it were, and urging us on. So *secundus ventus . . . secundo flumine, &c.*'

In the case of the wind and the stream the origin of the phrase is evident; but we confess we cannot readily form a notion of a hill running after us, at least without thinking of an avalanche in Switzerland, or some of the bogs in Ireland. Mr. Anthon will perhaps ask us for our own explanation; but we must decline giving any until we find authority for the phrase, which we do not at the present moment recollect ever to have met with.

Though Mr. Anthon's edition is, without comparison, superior to that by Mr. Trollope, still they have some defects in common. We have already pointed out Mr. Trollope's regard for certain grammatical terms borrowed from the Greek tongue: the following quotations will show that Mr. Anthon has a leaning the same way:—

Jug. 3. 41. '*Coepere nobilitas dignitatem populus libertatem in lubidinem vertere.* Note: an elegant *zeugma* operates in *lubidinem*.

C. 49. '*Ut quemque pecunia aut honore extulerat.* Note: a *zeugma* operates in *extulerat*, by which it assumes a separate meaning with both *pecunia* and *honore*. "As he had gifted (?) any one with a present of money, or distinguished him by promotion." The *zeugma*, however, may be avoided, if *extulerat* be rendered "he had distinguished." But this is less *elegant*.'

See also c. 29. *uti acciperet*, and c. 42. *multos mortalis*.

Again:

C. 14. '*Capti ab Jugurtha, pars in crucem acti, pars bestiis objecti.* Note: *capti* agreeing in gender with *adfines, amici, &c.* to which also *acti* and *objecti* refer by *synesis*.'

Similar notes are given on c. 16. *pars illa, qui, &c.*, and c. 95. *magno equitatu—quos, &c.*

A reference from one to another of these passages would have been, we think, a more useful illustration for the American student, than the apparent solution of a difficulty by calling in the assistance of certain Greek words. There are other terms of the same nature we might point out, such as *metonymy, archaisms, &c.*

The other point, wherein our two editors agree, is the practice of explaining grammatical difficulties, by understanding, or, as Mr. Trollope would express it, by *subauding* certain convenient words. Every page of the notes would furnish examples:—

Jug. c. 48. '*Humi arido, understand solo to govern humi in the genitive.*'—c. 84. '*Plerosque militiae cognitos. Militiae, sc. in tempore.*'

Or, again :—

Jug. c. 30. ‘*Apud plebem gravis invidia; patres probarentne flagitium, an decretum subverterent, parum constabat.*’

Upon this we find the following note :—

‘Cortius places a comma after *patres*, which then becomes either the nominative absolute, or else the accusative governed by *quod ad* understood. The punctuation we have adopted is decidedly preferable. “It was uncertain whether the Senate would approve,” &c.’

The explanation, by supplying the words *quod ad*, can scarcely be called an explanation at all, seeing that *quod ad patres* is a phrase wholly inadmissible. (In c. 92. is another instance, where Mr. Anthon avails himself of the same explanation.) All, perhaps, that Cortius meant by the unfortunate comma, was this, that the reader should throw an emphasis upon the word *patres*, as opposed to *plebem*; and, after an emphatic word, a pause is always made in practice, no matter whether it be noted in our system of punctuation or not. We object also to Mr. Anthon’s translation, for the very reason that this emphasis is neglected. Had the order of the English corresponded more closely to that of the original, this defect would have been avoided; and this leads us generally to complain of the practice in our schools of transposing the words of a Latin author in translating, so as to reduce them to what is conceived to be the natural order of the English tongue. Some of our school books go even so far as to lay down certain rules for this re-arrangement. A boy is first to hook up a nominative; then, we believe, he is to bait for a verb; and so on. Now we feel assured that if the words were translated somewhat more in the order in which they present themselves, the meaning of a passage would more readily be found, and the translation would be more likely to retain the spirit of the original.

So far we have given a somewhat unfavourable view of Mr. Anthon’s Sallust. It remains to lay before the reader extracts from such of his notes (and they constitute a considerable portion) as deserve commendation. Those on geography are, almost without exception, far superior to any we meet with in our English editions.

The following is the note on *Zama*, Jug. c. 56 :—

‘*Zama*, a city of Numidia, five days’ journey west of Carthage, according to Polybius (xv. 5.). Near this place Scipio, subsequently surnamed Africanus Major, obtained a decisive victory over the Carthaginian forces under the command of Hannibal. Strabo and Hirtius speak of it as the royal residence of Juba. It was levelled to the ground by the Romans after the death of Juba,

but rebuilt in the reign of Hadrian, and by his orders. No traces of it remain at the present day, &c. &c.'

We give another note of the same nature:—

Jug. c. 21. Cirtam. ‘Cirta, now Constantina, a city of Numidia on the river Ampsagas, at a considerable distance from the coast. It appears to have been originally the only important city of the more inland parts of Numidia, and hence, probably, its name from the Punic *kartha*, “a city.” It was the royal residence of the kings of Numidia, of whom Micipsa, according to Strabo, did the most to enlarge and improve it. Compare the words of the geographer (Strab. 17. vol. vi. p. 669.) It was afterwards called Sittianorum Colonia, from P. Sittius Nucerinus, who greatly assisted Cæsar in the African war, and was rewarded for his services with the city and district. Compare note on Catiline, c. 21.’

In the notes on *luxu* (dative), c. 6, and *die* (genitive), c. 21, we have the best kind of illustration in a collection of passages where the same forms occur. There is an excellent note of the same character on c. 16, in reference to the words *sama*, *fide*, the length of which alone prevents us from quoting it. Moreover, Mr. Anthon takes considerable pains in referring his reader to the other authorities for the different historical facts given in the text of his author. Notes of this kind have the twofold advantage of brevity and utility.

On the whole, we find it extremely difficult to come to a conclusion as to the merits of Mr. Anthon’s edition. There is much that is good in it; there is also much that might be improved or totally erased. With this qualified opinion, we must leave the book in the hands of our readers.

ELEMENTS OF ALGEBRA.

The Elements of Algebra, designed for the Use of Eton School; by the Rev. John Bayley, M.A., late Fellow and Mathematical Lecturer at Emanuel College, Cambridge.—London: Whitaker, Treacher, and Co.

THIS is a book for the use of Eton, well printed, and imposing in its appearance. We can now see how algebra is taught in one of our largest public schools. It opens with a definition of algebra, and an ‘explanation of algebraic characters,’ in which the most material omission is, *what is meant* by the letters that are put down. It begins, ‘The number prefixed to an algebraic quantity is called its coefficient;’ but what an algebraic quantity is, this deponent

sayeth not. It proceeds to the symbol — $7ax^2$, which is called a *quantity*; while, just before, it is said that 'when *one* quantity is to be subtracted from *another*, it is preceded by this sign (—).' This mystification goes on throughout, and its frequency in elementary works is thought to palliate its absurdity.

The work is divided into two parts; the first consisting entirely of rules and examples, the second of the same processes repeated more rationally. Strange to say, there is nothing on simple equations in the first part, though quadratic equations are introduced. Ratio is said to be 'the relation, in point of magnitude, which one quantity bears to another of the same kind. For *instance*! the ratio of (a) to (b), expressed thus ($a : b$), denotes the magnitude of (a) with respect to (b); and when two ratios are equal to one another, the four quantities composing them are said to be *proportionals*.' Here is the old definition of Euclid, which is allowed to mean nothing; but it is not here, as in Euclid, that the unmeaning phrase is followed by a test of equality of ratios which supersedes the preceding definition. The moment after we come to this—'It *appears from the definition* that $\frac{a}{b} = \frac{c}{d}$.' We confess we cannot see this.

The extension of the law of exponents to fractional powers is assumed, and not proved. The imaginary expressions $\sqrt{-a}$, &c. are introduced without the slightest notice of their nature, except what is contained in the name *imaginary*. The author seems to think that it is justifiable to convert a theorem into a definition, for we find, 'if a room be 8 yards long and 5 yards broad, the floor is *said* to contain 8×5 (or 40) square yards.' Now, the only conventional part of this is the saying 'square yard' instead of 'square whose side is a yard'; the remainder is a demonstrable theorem. But as if to make up for sometimes admitting as a definition what ought to be proved as a theorem, we find a contrary course pursued, and that which is conventional stated as a result of demonstration. For example:—

$$\frac{x^3}{x^4} = x^{3-4} = x^{-1};$$
 but $\frac{x^3}{x^4} = \frac{1}{x};$ therefore $\frac{1}{x}$ is the same as $x^{-1}.$ In like manner it may be *shown* that $\frac{1}{x^3}$ is the same as $x^{-2}.$

We find in Logarithms the following:—'If we assume a certain quantity, a , with a variable index, x , it is *evident* that, by taking every possible value of x , the quantity a^x ma

represent all numbers whatever.' In the first place, this is not correct; in the second place, if it were, it is not *evident*. Can the author tell us what value must be given to x to make $10^x = 9$? He will answer that he can take x so as to bring 10^x as near to 9 as we please. That is true, but it is not what he asserted.

There is a chapter on arithmetical notation at the end of the first part, which is better than the rest; but we do not see the use, in so small a treatise, of establishing a formula for perfect numbers. The second part contains proofs of many of the rules in the first, and commences, very rationally, with simple equations, this being in reality the most simple part of algebra. The whole is easy and correct until we come to the chapter on involution. Here the binomial theorem is proved; and, though we do not object to the execution of this part, we cannot see how pupils trained after the preceding methods can understand it. After several chapters, we come again to the subject of logarithms, where we find an oversight of this nature. The development of $(1 + b)^x$, arranged in powers of x , is asserted to be

$$1 + x \left(b - \frac{b^2}{2} + \frac{b^3}{3} - \&c. \right) + \frac{x^2}{1.2} \left(b - b^3 + b^4 - \&c. \right) + Rx^3 + \&c.$$

The coefficient of $\frac{x^3}{1.2}$ is totally wrong; it should be $b^2 - b^3 + \frac{11}{12} b^4 - \&c.$, being, in fact, as is afterwards proved, the same

as $(b - \frac{b^2}{2} + \frac{b^3}{3} - \&c.)^x$. Surely the author should have

observed the remarkable form of $(b - b^3 + b^4 - \&c.)$, as he evidently means the law established in the two last terms to continue; and, had he really satisfied himself of its truth, he should have caught at the immediate consequence, which is $(\text{Log. } b)^2 = b - \frac{b^3}{1+b}$; a result hitherto unsuspected by

mathematicians, and which would have established his fame as an analyst to the end of time.

The author of this treatise must excuse our speaking plainly about his book, of which we can neither approve the plan nor the execution, except that, as to the latter, the rules given are free from ambiguity. He is a man of talent, meant for better things than combining (we cannot add arranging) the numerous absurdities prevalent in our algebraical works. He owes it to his situation not to let

the mathematics, already sufficiently looked down upon in our public schools, be exhibited to youths who are likely enough to despise the study, in a shape which will furnish some excuse for their contempt.

LESSONS ON NUMBER.

Lessons on Number, as given in a Pestalozzian School, Cheam, Surrey. John Taylor, London, 1831.

THIS work forms a part of the same series of publications as the *Lessons on Objects* noticed in the first number of this Journal. They deserve general attention, as professing to be the result of actual experience ; and the treatise now under consideration has accidentally also a peculiar claim on our notice, from the circumstance that, in the article already referred to, the science of number was one especially pointed out as requiring elucidation on the principles adopted in the *Lessons on Objects*. We are, therefore, desirous of examining with what success this has been furnished by the publication before us.

The plan on which it is intended that the first processes of arithmetical instruction should be conducted, is stated by Dr. Mayo, in a preface which he has contributed to the work, the body of which is written by a foreigner ; and a few short extracts will best show the scope of the treatise, and the principles on which it is meant to depend. After a well-merited panegyric on Professor De Morgan's Treatise on Arithmetic, Dr. Mayo observes—

‘ The aim of the little work now offered to the public is different ; it does not propose to explain processes, but to unfold principles. The pupil is not taught to comprehend a rule, but to dispense with it, or form it for himself. The path along which he may be led may be longer than the usual route ; but then it is in broad daylight, he is more independent of his guide, and derives more health and vigour from the exercise.’ . . . ‘ When the true end of intellectual education shall be admitted to be, first, the attainment of mental power, and then the application of it to practical and scientific purposes, that plan of early instruction, which dwells long on first principles, and does not make haste to make learned, will be acknowledged as the most economical, because the most effectual. Experience will show, as it has indeed already shown, that while superficial teaching may prepare for the mere routine of daily business, whosoever a question, not anticipated in the manual, occurs, none but the pupil whose faculties have been exercised in the investigation of truth, who is the master—not the slave of rules, will

solve the unexpected difficulty, by a novel application of the principles of the science.'—*Preface*, pp. viii. x.

'In this preparatory course' (a course of instruction previously described as rather intended to train the mind for the study of the science, than to communicate the knowledge of it) 'the order is determined by a consideration of the mind of the pupil; it commences with what is 'already known to him, and proceeds to the proximate truth; the more easy precedes the more difficult, the *individual* prepares for the *general* truth, the *example* for the *rule*.' . . . 'It is strongly recommended that it be used as a course of *mental* arithmetic; that is, the questions should be solved in the head, without any figures being written on the slate by the pupil. In this manner it retains more of its character as an *intellectual* instead of a *mechanical* exercise. The vigour, freedom, activity, clearness, and retentiveness of mind, which a persevering adherence to the plan imparts, will prove an ample compensation for any additional trouble which it may seem to occasion.'—*Preface*, pp. xi. xii.

With the latter part of this extract,—that which enforces the importance of exercises in mental arithmetic,—we entirely agree. They furnish very much the best foundation of all arithmetical knowledge; and probably have only failed to be generally used for that purpose, because it is less trouble for a teacher, if idle, to look over a written sum, than to attend to all the steps as orally expressed; or because it is easier for him, if ignorant or unthinking, to examine results by applying a mere rule, than to attend to, and explain the difficulties which a child may meet with in the course of an operation. If this publication shall induce any parents or teachers to attach more importance to the exercises which it recommends, it will not fail to be of great and enduring value. And it ought to have this effect; for, whatever may be its imperfections in other respects, it at least furnishes a large collection of questions suited to the faculties of children in the early stages of mental arithmetic, carefully arranged in a progressive order*, from the very

* This commendation of the order observed must not be taken without some allowance. The general principle of the work is to observe it, but there are some few singular inversions. At page 78 a very remarkable confession of disorder occurs:—'The pupils should, therefore, be well acquainted with similar divisions, which, by means of the subdivisions of a line, may easily be obtained by them. The *following exercises* ought, therefore, to precede the above.' If this were an after-thought, the hurry of publication may explain why the transposition thus recommended was not actually made; but it will not justify the failing to make it. There are other symptoms of a haste to publish, which is a good deal to be regretted. We had occasion, in our notice of Professor De Morgan's Treatise, to speak of the incorrectness with which it was printed, and the observation is too often applicable to works of science; but some parts of the present work, for it is very unequal in this respect, very far exceed any ordinary limits of inaccuracy. In page 81, there are no less than eight errors of the press. There is also a good

simplest possible, to the more complicated examples which it comprehends. The observation of this order is strongly recommended in the work itself; and undoubtedly, although it sometimes occasions a little tediousness, especially when combined with another cause, which we shall hereafter have to mention, it is, on the whole, very desirable to adhere to it. Another important merit of the work consists in the manner in which, in its earliest pages, the idea of number is extracted from the consideration of the objects by which it must in the first instance be exemplified. It is done without any parade of abstraction, but successfully and completely; and the author, without being in too great a hurry to get rid of the sensible objects which he at first employs, is very soon able to do so.

In proceeding to the examination of other parts of the work before us, we enter upon more questionable ground. We shall not have occasion for much of particular criticism on the execution of different portions of the design: the point mainly to be considered is the principle adopted; for it is in this respect that the work puts forth the strongest claims to attention. If we are entitled to take the earlier portions of the extracts already made from Dr. Mayo's preface, in their most obvious sense, as furnishing the exposition of this principle, it contains nothing from which we should dissent, and very little which we should wish to qualify. But there is some ambiguity in the expressions used, and when we take the '*Lessons on Number*' themselves, as a commentary on the text of the preface, we fear that there may perhaps be more difference between our notions than we should otherwise have suspected.

Dr. Mayo, after explaining that upon his system no technical rules are given antecedently to examples, informs us that the pupil is not taught to comprehend a rule, 'but to dispense with it, or to form it for himself;' 'that the individual *prepares* for the general truth, the example for the rule.'

deal of inconsistency in the manner in which fractions are represented; they are generally reduced to their lowest terms, but by no means uniformly so, and the exceptions do not appear to depend on any fixed principle, or to have any particular object. In another respect, also, the employment of a very little time might have produced much benefit. Dr. Mayo, in his preface, claims indulgence for any inaccuracies of style or inelegancies of expression in the body of the work, on the score of its author being a foreigner. Surely it would have been more to the purpose to have had the proof sheets revised by an Englishman. The alterations required would have been very trivial, and might have been made with the utmost ease; but they would not have been unimportant. The inaccuracies which now occur are not frequent, but they sometimes occasion difficulty in understanding the passages where they are found.

The author of the work, to which these remarks are prefixed as an introduction, says—

‘Thus, without assistance of rules, generally little understood, by a chain of simple reasonings, easily ascertained by facts equally simple, we arrive at results hitherto inaccessible to the understanding of a child.’ p. 97. ‘Such were the answers, nor early such, that have actually been given by children of the age of nine or ten years. We give no rules but those found by the pupils themselves; they are fetters which enchain the powers of the mind, and deprive it from ever attaining strength and vigorous health.’ pp. 69, 70.

The reader must not understand from the last passage, that the child is *generally*, in this treatise, led up to the construction of rules for himself, or that such rules *are* the ‘results’ spoken of in the preceding extract. There are, indeed, some instances of the attainment of such rules, but they are few; and the results generally consist merely in the solution of particular questions. Are we, therefore, to understand that when the pupil is taught either ‘to dispense with a rule, or to form it for himself,’ it is immaterial which he does? and that when ‘the example *prepares* for the rule,’ it is the object of this treatise to furnish such a preparation *only*? The former of these is a question of general importance; the latter chiefly affects the value of the particular work, and perhaps calls for little remark, except that, if the treatise be meant to furnish only an introduction to rules, it furnishes one of extraordinary and, we think, unnecessary length.

On the main question, we entertain no doubt of the thorough soundness and great importance of the principle, that it is desirable, as far as possible, to conduct a child gradually, by his own observations and induction, to the rules which he is hereafter to apply. All knowledge acquired by reasoning and observation is more valuable, and is better known, than that which is received on the authority of others. It is better known, because, in the process of its acquisition, it has been seen in various bearings and connexions, and because the principles on which it depends have been fairly worked into the mind, and remain there, capable of the same and further applications, even if the results originally deduced from them are confused or forgotten. It is, for the same reason, more valuable; and yet more so, because the process of acquisition has exercised the most important faculties of the mind, instead of being confined to the exercise of others of inferior dignity—namely, memory, and a certain degree of attention and distinctness in comprehending the application of a set form of words, and performing the operations which they direct. Whenever, therefore, a child can be led

to form, to think out as it were, a rule for himself, it is most desirable that he should ; but it does not, therefore, follow, that in cases where he is unable to do so, the rule should be suppressed or omitted ; nor does the mere fact that he may be taught, without the rule, to perform the same operations, prove that the rule is superfluous, or ought not to be communicated, when the operations without it are much more laborious and circuitous than when it is applied. Where, indeed, the principle of the rule is unintelligible, even when communicated, it may generally be desirable to suppress it : there may be more harm in accustoming the mind to take things upon trust, than in leaving it without the practical assistance to be derived from the rule itself. But the more common case will be that of a rule not within the compass of the learner to discover, but admitting of full explanation and proof, such as he can comprehend, when it is once announced to him. And these rules it appears to us desirable to communicate ; not in the first instance, indeed, before the want of them has been found, and their value consequently appreciated, by examples of the same operations performed without them ; but as soon as these preliminary steps have been gone through, and without waiting till the same cautious process has been carried into other departments of the subject.

Perhaps the importance of the alteration thus suggested will most fully appear by one or two instances of the inconvenience and imperfection occasioned by the plan adopted in the work before us ; and we will take one where it would be difficult, or perhaps impossible, to conduct a child to the discovery of the rule required, yet the rule is perfectly intelligible when explained ; another, where the rule itself, by a series of questions artificially combined, might become the result of the pupil's own speculation. The first of these is the principle of numeration.

It may appear that, as the great value of a system of numeration is the facility which it gives to the operations of written arithmetic, it would be superfluous to take any notice of it in a collection of examples designed for exercises in mental arithmetic only. This, however, is hardly the case, when we look to the execution of the work before us ; for the pupils, though forbidden the use of pencil and slate in performing the operations required for them, are occasionally allowed the assistance of seeing the question itself written before them (p. 70), so as to keep the data on which they are to proceed before their eyes, during the course of the operation founded upon them ; and in page 45 it is said to be desirable that the pupil should write the answer to

particular questions ; ' yet the pupil is not supposed to have any knowledge of the expression of numbers by figures. The teacher should instruct him in the use of the conventional signs, though the pupil might write, *in words*, the result of his calculation.' The questions here referred to have, among their answers, such numbers as 25, 50, 100 ; the conventional signs required, therefore, are not merely the figures 1, 2, 5, &c., but those figures with their values determined by the places which they occupy, or by the system of numeration adopted. Both for its importance, and for the care required in its explanation, the mode of ascertaining these values should be most particularly pointed out ; but this, as we have seen, is left to chance, and to the unassisted discretion of the teacher in filling up the void, which is pointed out in the above extract, but not supplied.

The inconvenience and evil of the omission, however, even upon the most limited acceptation of the scope of the treatise before us, is not confined to the impracticability of using the particular aids required in the above examples ; it runs through the whole tenor of the treatise, and produces exactly that effect of confusion and uncertainty, which it is the general object of the plan to avoid. The necessity of some system of local values, or rather, when we speak without reference to the representation of numbers in writing, of some mode of breaking up a large number into different parts for the convenience of operation, does not require any proof here, and a very small number of instances would make it intelligible to a child. Indeed, this is done in the work before us ; for, although no account is given of the division of a number into tens and units, or hundreds, tens, and units, &c., as the case may be, this division is practically used. But why is ten selected as the scale ? why is the same scale always used ? why is the result finally represented according to it ? Thus, in page 14, we have the following instance :—' 37 and 49 are 3 tens and 4 tens and 7 and 9 ; or 7 tens and 16, or 8 tens and 6, or 86.' Why is this rather worked thus than in the following manner : 37 and 49 are 4 nines and 5 nines and 1 and 4, or 9 nines and 5 ? or, working it as it is worked, why is not the result left in the shape of 7 tens and 16, like three score and twelve, or expressed in the French way, which furnishes a closer analogy, *soixante douze* ? It is no answer, to say that we break up the number into tens and units, rather than into nines and units, or any other scale that might be assigned, because the expressions thirty-seven and forty-nine furnished at once, from their construction, the means of making the first

separation, and not the others ; for they only do so, because they are founded on a principle of numeration ; and it is, therefore, only by the partial adoption of this principle that they furnish the facility relied upon. In a system of education which professes to look more to the formation of habits in the mind, than to the actual results obtained at an early period, it is surely inexpedient to allow this sort of half-knowledge, neither acquired by the pupil's own researches, nor explained by the teacher, but picked up incidentally, and almost unconsciously, as an arbitrary rule for the arrangement of numbers ; resting, as far as the learner is concerned, upon no principle, and producing, as far as he sees, no advantages. And it seems to us unnecessary that it should be so : because, though the notion of a scale is too artificial for the pupil to be led to form one for himself, it admits of an easy explanation ; and the probable reason for choosing ten as the scale, from its being the number of the fingers, is a fact just of the kind which a child will fully comprehend, and will, therefore, hear with interest, and remember with ease. Any advantages which that particular scale presents for purposes of computation cannot of course be presented intelligibly to a learner ; but the necessity of adopting some mode of dividing numbers, and the convenience of making that mode uniform, may be made sensible to him, and *some* reason given for adopting this particular method in the circumstance already adverted to. We cannot but think that, if the advantage rested here, the mind would be better educated thus, than by leaving a child entirely ignorant of the principle of the arrangement adopted, or even of the fact, except by the comparison of a large number of instances, that there is any uniform mode of arrangement at all.

The evil, however, is very far from stopping here. When a principle of numeration, or of considering a number as divided into the successive powers of the number adopted as the scale of notation, is once established, every operation becomes a precedent for another : the mode of operating on tens and units is a proof of that for operating on hundreds and tens, for the quantities involved are similarly related : they are, therefore, only instances, in fact, of the same operation, the addition of 220 and 130, or of 22 tens and 13 tens, being obviously exactly the same thing as that of 22 apples and 13 apples, the tens in the one case, and apples in the other, being merely the subjects on which the operation is performed. There may be different ways of expressing this ; and, of course, it would require much both of simplification and expansion before it was introduced to children ;

but, directly or indirectly, something of the kind is absolutely necessary, or else all the processes of arithmetic are reduced to mere *counting*, and the learner is not able to form any conclusion respecting numbers exceeding those which he has actually reckoned up to. Thus, in page 24, we learn that '705 less 359 is 70 tens and 5 less 35 tens less 9, which are 35 tens and 5 less 9; that is, 355 less 9 = 346;' where the principle of numeration mentioned above is obviously adopted, but indirectly, and without explanation; and the final solution, that 355 less 9 = 346, depends only on the pupil being supposed previously to have learned to add the particular numbers 9 and 346. The reader of this article, indeed, may feel some doubt whether the latter step is correctly represented; but on reference to the page in question, he will find that no other means of performing this operation have been given; that the only simplification pointed out is the division into tens and units; and that the units are always subtracted directly from the remainder, after the deduction of the tens, without any direction as to the mode of performing the operation. In the same manner, the division of 732 by 2 is thus conducted in page 37: '2 is contained in 700, 350 times; in 30 it is contained 15 times; and in 2 it is contained once; therefore 2 is contained in 732, 350, 15, and 1 times, that is 366 times.' The first step of this process, that 2 is contained in 700, 350 times, must have been arrived at in one of two ways: either by taking the successive multiples of 2, up to that number, and treating the result as a mere matter of recollection, or else by subdividing 700 into 6 hundreds and 10 tens, and taking the half of each of those quantities. In the former case it is, as before, mere counting; in the latter, besides that it is indirectly numeration, what reason is there for avoiding the convenience of operating in the same way on the more complex number 732, which is supposed to have been already adopted in the case of the simpler number 700?

These are instances enough of the inconvenience occasioned by the omission to teach any system of numeration; but the first of them leads us incidentally to the mention of another omission of a different kind, that of a rule which the learners might, we think, be led to form for themselves. It is perfectly obvious that, if a number be divided into any two parts, each greater than another number which is to be subtracted from it, the remainder, when the subtraction is performed, will be the sum of one of the parts of the original number, and of the difference between its other part and the subtrahend. It is plain, also, that the less the difference be-

tween this latter part and the subtrahend can be made, the simpler will be the operation of subtraction. If the latter could be at once taken equal to the subtrahend, the operation would be at once performed: in the absence of this, the nearer it is taken, the less knowledge of particular values, or the differences between particular numbers, is required. For instance, referring to the example already taken, of the subtraction of 359 from 705, the question is only solved by the knowledge of the fact that the difference of 9 and 355 is 346. Would it not be much better to show that $355 - 9 = 300 + (55 - 9)$, or $300 + 46$? or, as this involves the knowledge of the fact that $55 - 9 = 46$, to subdivide the number differently, and say either that $355 - 9 = 340 + (15 - 9) = 340 + 6$, or that $355 - 9 = 345 + (10 - 9) = 345 + 1$. The pupil might, we think, be easily led, by progressive examples, to find out for himself that the best mode of dividing the larger number was one of those above suggested; the former requiring no knowledge of the actual differences between numbers, except the differences between each number under 10, and all the numbers not more than 9 greater than itself; the latter requiring none except that of the differences between 10 and every number below it. The same principle would require a little, but not a difficult extension, to meet the case of a subtrahend consisting of more than one digit; but, when the principle of numeration was once established, it would be a mere extension. And, when this extension was made, the result of using the former mode of subdivision would be, in substance if not in form, the common rule for subtraction, or, rather, the nearly equally commodious rule which diminishes the digits of the number from which the subtraction is made, instead of *carrying*, as it is called, or increasing the digits of the subtrahend; and that of using the latter subdivision would be, in substance, the rule for using the arithmetical complement.

We have given these instances of the omission of rules, the former as the most important, the latter as one which, in our judgment, might have been easily and beneficially supplied. We do not propose to give any other examples, or to enter into any other criticisms of detail; but the omissions already pointed out, especially that of numeration, lead to one important remark affecting the general execution of the treatise before us. If the rules and principles of arithmetic are philosophically deduced and explained, the acquisition of any one makes all the others easier of attainment. It is not that the one rule involves or explains another, but it involves a general knowledge of the nature of number itself, a gene-

ral facility and distinctness in dealing with it ; and the principle of numeration, more than anything else, requires and produces this familiarity. While, therefore, we fully allow the expediency of beginning every new stage of the science from the very commencement, from the easiest and simplest examples, instead of passing immediately from rule to rule, we should expect that in each successive stage the number of these mere examples might be diminished ; that the general familiarity with number and its relations acquired in the learning of one rule would, in some degree at least, facilitate the acquisition of the next, and that the simplifications finally adopted in one case would suggest corresponding contrivances at an earlier period of another. We do not, however, find this gradual shortening in the treatise before us, or, if it exist at all, it is in a very slight degree ; and we can assign no other reason than that the omission of rules does, in fact, prevent the learner from acquiring the same command over his subject which his acquirement of them would give him. We say that it does so in fact, because the treatise professing to be the result of actual experience, we must suppose that the numerous examples given throughout the work before us are not more than have been found practically necessary on the system adopted. The omission of rules, therefore, is that cause of occasional tediousness, to which we have already adverted.

In referring to the work before us as the result of experience, and using that experience in consequence, as bearing some testimony against the plan adopted, as far as the exclusion of rules forms a feature of it, we are not insensible to the weight which the treatise derives from the same consideration. A process which has been found by experience to work well cannot but deserve respectful attention, and any strong and unqualified censure of it could hardly fail to be misplaced. We are very far from intending so to deal with the 'Lessons on Number ;' on the contrary, we think that, even in their present state, they may be used with much advantage. We think, however, that they might be very materially improved by the addition of some of the matters already suggested in this article. We cannot, indeed, help fancying it likely that many of the omissions of which we complain may practically be supplied in the course of those oral instructions, the results of which are embodied in the work before us ; and that the pupils may incidentally be taught much which we are of opinion that they ought to learn, and which the published work does not show us that they do. The knowledge in question may be acquired in

different cases at different stages of the process, and from this want of uniformity in the method and time of gaining it, it may fail to find a place in the system as published. Still, as the knowledge itself seems to us of the greatest importance, we cannot but be of opinion that the 'Lessons on Objects' would be improved if they were systematically directed to its acquirement.

Until some such alteration is made, we think that the treatise would be more beneficially used in combination with other works on the same subject than alone. With all the importance which we attach to the exercises of mental arithmetic, we see no occasion for making a complete course of it precede any introduction to written processes ; nor is it necessary to confine its operations, as the present treatise seems to confine them, to examples which scarcely require the aid of rules for their easy and commodious solution. Regarding the 'Lessons on Number,' therefore, as a very valuable collection of questions and examples, arranged in the order recommended by experience, we would use them as an introduction to each rule or department of the subject. But when a certain familiarity with the practice had been thus acquired, instead of passing on to the practice of the next division, we would introduce the learner to the rules devised for the convenient performance of that on which he had already been engaged ; these rules, of course, not being delivered to him as mere arbitrary formulæ, but being explained to him from the work of Professor De Morgan, or some other treatise founding them upon reasoning and demonstration. When the rules were thus acquired, we would recommend a further course of their application, both by writing and by mental operation, before proceeding to the next division of the subject. The length of this would depend on the attention and dexterity of the pupil ; it would generally be short : and it might not always be necessary to wait scrupulously for the completion of one subject before proceeding to any consideration of the next. In passing from one division to another, we would again begin with the 'Lessons on Number,' and proceed, as they do, from the very simplest examples. But we are much mistaken if the number of those required would not be found rapidly to diminish at each successive stage of the process, and if the whole science would not be acquired both more rapidly and better, and more real exercise and improvement afforded to the mind, by this mode of procedure, than by adhering closely to that adopted in the work under our consideration.

SMITH AND DOLIER'S MODES OF TEACHING.

WE have always imagined something very like quackery to exist in the various Inventions of Messrs. Smith and Dolier, ' all having for their object the saving of time and labour, and rendering education much more agreeable and easy than it has hitherto been.' These, if indeed they be inventions, have but a very slender title to the name, while the importance with which their respective merits are ushered into notice is wholly disproportionate to their intrinsic value. They are, indeed, of too trivial a nature to claim the attention of this journal. We have, however, read with great pleasure a small volume,* recently published by Mr. Smith. The awfully long title, and the tone of self-commendation which prevails throughout the volume, might, on a cursory glance, induce the belief, that this work is of the same class as the before-mentioned inventions of the writer; but, after a careful perusal, we are of opinion, that the ' Key to Reading ' may fairly take its rank among books of utility in the business of education. It evinces rational views and much practical knowledge of the subject; and we are constrained to acknowledge, that its author is very superior to a mere ruler of copy-books, and a maker of *derible* ink. We understand that Mr. Smith is assisting by lectures, as well as by other exertions, in the important object of enlightening the rising generation, and we cannot doubt about the beneficial influence that must attend such methods of enforcing sound principles, and of persuading to rational practice.

The plans proposed by this gentleman are not, perhaps, quite as original as he may consider them, but he has the merit of causing them to become of extensive utility, inasmuch as the best parts of the most rational systems are brought forward in his volume, in an attractive popular form, calculated far more certainly to promote their adoption than if clothed in a more elaborate treatise, or encumbered by the technicalities of learned disquisition.

The ' Key to Reading ' is explanatory of a method whereby this branch of education should be conducted, and which may be pursued with advantage by all who are interested in the

* A Key to Reading; designed to assist parents and teachers to superintend lessons for youth with pleasure and advantage to themselves and their pupils. To which are added, An imaginary grammatical picture. An introduction to mental Arithmetic, and a sketch of Mnemonics. By John Smith, Lecturer on early Education, &c. Second Edition: pp. 108. Simpkin & Marshall, Stationers'-Hall Court.

improvement of their pupils. The plan which it enforces is, perhaps, already partially practised by many rational instructors—

‘The prominent feature of the plan is to ascertain whether a pupil understands as much of every word he reads in his lesson as the instructor himself; and if not, it is then the province of the latter to afford all the information he can to the former, not only on the words under inquiry, but in reply to the questions of the pupil himself, who may suddenly be reminded of a word he has met with, at another time, and respecting which he feels himself to be ignorant.’—p. 34.

It may be said, that there is nothing very original in this; the extent of its application is, however, certainly new—

‘The principle of examination into the words and sentences of lessons is, as I have already stated, old and well known; I wish it had been as well practised; but there is a *beauty* and an *extent* to which it may be carried, of which few persons can have an adequate idea, until an example is given to them, and then a union of pleasure and instruction is presented to their contemplation far surpassing anything arising from ordinary mental exercises, and rendering (so far as reading is concerned), not only the school-room, but the domestic circle, a scene of endless and ever-varying amusement.’—p. 8.

The practical illustration of the above principle was first suggested to Mr. Smith, by the perusal of an account of the Edinburgh Sessional School, written by John Wood, Esq. In this work our author found all his own ideas on the subject fully exemplified, and he accordingly inserts a copious and most interesting extract from the chapter in Mr. Wood’s publication on the explanatory method in reading, which is replete with good sense and valuable views on the science of education. In this useful institution of the Scottish capital, the pupils are made to analyse every sentence as they read it, showing thereby that they thoroughly understand its meaning, while opportunity is taken by the instructor for imparting any general information with which the subject under discussion may naturally be connected. This is done in a manner which robs scholastic hours of their austerity, and converts an irksome task into a pleasurable exercise. Mr. Wood observes—

‘It is the constant remark of almost every stranger who visits the Sessional School, that its pupils have not at all the appearance of schoolboys, doomed to an unwilling task, but rather the happy faces of children at their sports. This distinction is chiefly to be attributed to that part of the system of which we are here treating; by which, in place of harassing a pupil with a mere mechanical routine

of sounds and technicalities, his attention is excited, his curiosity is gratified, and his fancy is amused. In the second place, when proper books are put into the hands of the scholars, every article which they read may be made the means, not only of forming in their youthful minds the invaluable habit of attention, but also of communicating to them, along with facility in the art of reading, much information, which is both adapted to their present age, and may be of use to them for the rest of their lives. How different is the result, where the mechanical art is made the exclusive object of the master's and the pupil's attention! How many fine passages have been read in the most pompous manner, without rousing a single sentiment in the mind of the performer! How many in which they have left behind them only the most erroneous and absurd impressions and associations!

. . . . 'A gentleman had, when young, been accustomed, like most schoolboys, to read, and probably to repeat, without the slightest attention to the sense, Gray's Elegy, not uncommonly known in school by the name of "The Curfew Tolls." What either "curfew" or "tolls" meant, he, according to custom, knew nothing. He always thought, however, of *toll-bars*, and wondered what sort of *tolls* were *curfew-tolls*; but he durst not, of course, put any *idle* questions on such a subject to the master. The original impression, as might be expected, remained, and to the present hour continues to haunt him, whenever this well-known poem comes into his mind.'—p. 11.

The words contained in a sentence are not simply explained with reference merely to the text, but also with a view to future exigencies, and in some cases their roots, derivatives, and compounds are pointed out. Thus, if the word 'unprecedented' should occur, its meaning is not simply given, but the attention of the scholar is directed to the three-fold composition of the word, the *un*, the *pre*, and the *cede*, while he is invited to furnish some other examples, where the syllable *un* signifies a negative—then to illustrate the meaning of the syllable *pre* in some other words of which it forms a part; and, lastly, the signification of *cede* coming under examination, the meaning of its various compounds is required. Mr. Smith was induced to visit the establishment where so judicious a mode of instruction is practised, and he furnishes an interesting account of what passed in an examination of some of the pupils.

Although these belong to the humblest classes, they possess an advantage which rarely falls to the lot of any description of scholars,—that of having an enlightened philanthropist to direct and watch over their studies.

Mr. Wood, formerly pursuing the profession of an advocate, is now retired from business, and devotes nearly all his time and his talents to the superintendence of the Sessional

School, and the advancement of its pupils. With unremitting zeal does this benevolent gentleman 'afford the benefit of his valuable assistance to the teacher and the pupils of the school, in attending to the duties of which from ten till three o'clock every day, he is almost, if not quite, as punctual as the stipendiary master himself.' Many visitors attend this seminary, and take a great interest in all that is going forward. Passages are selected out of the school-books by any stranger present; and after one of the pupils has read a chosen paragraph, he is required to close the book, and give, in his own language, an account of what he has just read. Each person present is then at liberty to put questions to any of the children who compose the class, relating to the signification of the words, their parts of speech, the grammatical construction of the sentences, or any other question bearing upon the subject under discussion. Mr. Smith fixed upon part of a book which appeared to have been least 'travelled over,' and proposed a particular passage for perusal. The success which has crowned the benevolent exertions of Mr. Wood is instanced in the examination that ensued. The limits of the present article will not allow the insertion of the whole in detail. The pupils evinced throughout a knowledge of language, a clearness of ideas, and an acuteness of discrimination, which those who have only witnessed the made up exhibitions of other charitable institutions for education, can scarcely credit as having been displayed by any youthful scholars, and more especially by the children of labour. If these be, indeed, the spontaneous answers of the pupils, and we have not the slightest reason for questioning the fact, they exhibit a far greater degree of intellect than is usually found in seminaries wherein the higher classes are usually educated. Let it be remembered, however, that, in the present case, no long tasks had repressed the desire of knowledge—no grievous burden on the memory had deadened the other faculties—but the mind had been expanded by a judicious course of instruction—the pupils had been incited to inquire, to think, and to reason—they had been called upon to exercise with pleasure those powers which become more vigorous and acute in proportion to their healthful exertion. This is indeed a triumph over the antiquated systems of mechanical learning.

One or two short extracts of the examination are given, as they may perhaps afford some idea of its nature, and of the proficiency of the scholars—

‘Q. It is said, “These were the breathing times of our heroes.” What were the breathing times?—A. Short intervals in the battle.

‘ Q. What is meant by “to breathe” literally?—A. To respire.

‘ Q. By what word would you express to “breathe in?”—A. To inspire.

‘ Q. How would you express to “breathe out?”—A. to expire.

‘ Q. How would you express to “breathe through?”—A. To perspire.

‘ Q. What word would describe ot “breathe together?”—A. To conspire.

‘ . . . Q. What is “immediately?”—A. Literally, it signifies, nothing being in the middle.

‘ Q. How would you express to go in the middle as between parties?—A. To mediate.

‘ On the word “anxious” occurring, I asked one of the boys its meaning. He said, being anxious was hoping for or desiring. I asked, would not the word “eager” express as much as that? “Yes,” said he; and then, as if a new distinction had struck him, he said, “but there is a fearfulness included in anxiety which is not expressed in eagerness.”—p. 32.

In how superior a degree are the minds of these poor children stored with clear ideas, invested with the powers of reasoning, and incited to a disposition of profiting by their education in after life, than are those of the unreflecting beings who have been driven through the ordinary course of school routine.

The second part of this work explains and recommends a novel and pleasing manner of teaching the elements of grammar to young children. It is justly remarked by the author that—

‘ *Tasks* in grammar are not only unnecessary, but useless, and indeed mischievous. They are unnecessary, because the object in view may be attained *without* them; they are useless, generally at least, because that object is *not* attained by means of them; and they are mischievous, because, from their dulness and unintelligibility, they fatigue the spirit and disgust the mind of the learner, who is consequently led to regard the acquisition of knowledge as a disagreeable, instead of what it truly is, a delightful employment.’

The parts of speech are here explained in an amusing conversation between the instructor and his pupil. The former, after explaining that there are only nine sorts of words which can be uttered, and that in learning to distinguish these, consists the first knowledge of grammar, proposes to form an imaginary picture, and invites each of his pupils to name something which shall be placed in it. After many images are grouped in this mental landscape, the children are told that all the words they have given are called nouns, and the teacher endeavours to impress this information on their minds. He then continues—‘ You see the picture is in no sort of shape yet; all the things are jumbled together in

confusion. We must have another sort of words to put them into order. Where shall your cottage be?' One of the little scholars may perhaps say *near* a brook, another *upon* the hill—these words called 'prepositions, which indicate the position of things in relation to each other,' are then explained and exemplified. The teacher proceeds thus to the adjective,—

' But we must improve this picture still more yet. You gave me only the *names* of cottage, church, &c., without telling me what *kind* of cottage, church, &c., you would have, whether large or small, old or new, &c. We must therefore take that little painter's brush called an *adjective*, and give some character to all these things. What sort of cottage will you have?'

After the children have each given their answer, the part which an adjective performs in a sentence is distinctly shown. The verb is then introduced:—

' Well, our picture begins to look handsome now, both in form and colour; but there is a sad want of life in it. "All, all is still." We must therefore give a little animation to it by using a few verbs. You will think it impossible to give life or action to a cottage or church, but you can give it a *state of being*; it can *stand*, it can reflect the sunbeams, &c., and these are verbs. But try some of the other nouns, what shall your bells do?'

Different verbs are then brought forward, and the children are 'initiated into a perception of verbs.' The conversation is continued in the same playful manner, until the picture is completed, and the pupils are thus familiarly introduced to the nine parts of speech.

Grave persons who have forgotten their first scholastic troubles, may perhaps deem all this trivial and puerile; but those who still recollect, with disgust, the long grammar lessons which they were compelled to lisp with tremulous voice, ere yet they could distinctly pronounce, and still less understand them, will feel grateful to Mr. Smith for having rescued their children from the same imposition, and for having associated pleasurable, instead of painful feelings, with the first lessons in grammar.

We do not consider the section devoted to mental arithmetic particularly useful for the purposes of education. Some curious properties of different numbers are given, and sundry excellent methods for shortening the process of mercantile calculations are shown, which, although they will not at all assist in conveying a knowledge of the science and philosophy of arithmetic, yet when once this knowledge has been acquired, might afford examples of the advantages to be derived from a clear perception of the nature of numbers.

Arithmetic is a most important branch of education, inasmuch as, properly taught, it may be made the first agent, by which the reasoning powers can be developed and exercised. The learner, who, at every step, is made clearly to see sufficient reason for his various operations, will acquire the habit of not taking anything upon trust, and of investigating for himself. It is of consequence, therefore, that this science should not be enveloped in any mystery, and that no properties of numbers should be presented to the pupil, but those which may be clearly understood by him. The satisfactory certainty in arithmetical studies forms their peculiar beauty. The *why* can always be clearly seen, and no legerdemain should be played off, to perplex, as well as astonish, the tyro.

Several properties of numbers are given in the present work, without any attempt at explanation, and many of these in a manner which would imply that there is something magical and inexplicable in the number 9.

'Would the pupil wish to see a sum in multiplication, the product of which should contain several figures, but all alike? Tell him to set down all the digits except the 8, and if he would like the product to be all ones, let the line be multiplied by one 9. * * And here again is the faithful number, for the product presents 9 ones.'

In like manner, to obtain a product of any other recurring figure, the line is multiplied by such a multiple of 9 as the figure required.

The examples of all the wonders of 9 closes with the following puerile passage:—

'It is evident that the number 9 is full of beauty, and the pupil may ponder on the curious effect of dismissing the 8 from its fellow figures; but although it be thus dismisseſ, it may claim, like its lesser brother 3, the merit of producing an important number, by multiplication into itself; for 8 times 8 are 64, and that number is a distinguished favourite with mathematicians, it being divisible by 2, or by 4, or by 8, or by 16, or by 32, or by 64, without breaking an integer. Half 64 is 32; half that is 16; half that is 8; half that is 4; half that is 2; and half that is 1; no fraction appearing in any of those divisions.'—p. 67.

Wonderful that the sixth power of 2 should be divisible by any of its lower powers without leaving a remainder!

The number 11 next appears on the stage to perform its unexplained evolutions; and, finally, the two numbers, 9 and 11, are made to astonish by a combination of their powers.

The next example given of a property of numbers is pretty and ingenious, and may amuse those who can be made to

understand the reason upon which it is grounded, but it certainly would not be advisable to show it to others who are not so far advanced. Leibnitz, it is said, was the first who remarked, that if any number of figures be set down in a line, and another line be formed of the same figures set down in any order below the others, after subtracting one line from the other, the remainder will always be divisible by 9, without leaving any fraction. For example—

$$\begin{array}{r} 792135 \\ 219753 \\ \hline 9)572382 \\ \hline 63598 \end{array} \qquad \begin{array}{r} 792135 \\ 573921 \\ \hline 9)218214 \\ \hline 24246 \end{array}$$

If only three figures be used, and their places be exactly reversed, the remainder will not only be a multiple of 9, but also of 11. No attempt is made in the present work at explaining the cause of what is here put forth as an arithmetic phenomenon. The reason of it may, however, be readily shown. It is evident that any term of the geometrical series 10, 100, 1000, &c., is divisible by 9, having a remainder of 1, therefore, if any of the terms 1, $10(9+1)$, $100(99+1)$, &c., be subtracted from any other higher term of the series, the remainder will be some multiple of 9; as $1000-1$, $1000-10$, $1000-100$. If the example given be generalized by putting a , b , c , &c., for the respective numbers, then $100000a+10000b+1000c+100d+10e+f$ represent the first line. When the second line is $100000c+10000d+1000b+100a+10f+e$, their difference will be $99900a+9000b-9900-100c-9900d-9e-9f$, which, it is evident, let a , b , c , &c., be any numbers whatever, will always be divisible by 9, and this in whatever order they may be placed. Again, in the second case, the first line is $100a+10b+c$, the second line $100c+10b+a$, this difference will therefore be $99a-99c$, and 99 is a multiple of 9 and 11.

This is so very simple, that it may be readily understood by children from nine to twelve years of age, who have had their minds previously awakened to the *rationale* of figures.

Mr. Smith extols much the extraordinary value of his arithmetical scales, for saving 'nearly all the time now wasted in setting and correcting sums in the four first rules, and for enabling pupils, in an amusing manner, to acquire an extraordinary ease and rapidity of calculation.' We do not entirely credit their great practical utility, save as being an amusing and rational toy.

Long 'routine sums' should never perplex or disgust the young learner, nor need the time of the master be employed

in correcting the errors of the scholars. All the four elementary rules are susceptible of proof from the converse, and it gives the pupil a salutary habit of depending on himself, to become *sure* that he is correct without any application to his instructor. The bright face with which a *proved* sum is always presented for inspection, shows that the *certainty* of being right is the greatest reward of exertion.

Quickness is not of so much consequence as correctness, and for the ordinary purposes of life, sufficient expertness will be always acquired by practice. It is of advantage in many vocations to be what is called a 'ready reckoner,' but this is quite subordinate to a proper understanding of figures; nor is it a necessary consequence that a 'quick arithmetician' should, on that account, be the better able to 'form a prompt and wise decision on important affairs through life.'

Everybody who is conversant with numbers generally finds out for himself some standard, and some practical rules which may facilitate his calculations, and it is far better that the pupil should be led to these by his own invention and management, than have them furnished to him, when most probably he will use without understanding them.

The extraordinary power of calculating with rapidity, as possessed by some few persons, may be regarded as an object of curiosity, rather than one of practical utility. We believe that the great mathematician, Euler, has been the only instance in whom this wonderful faculty has been displayed in very early youth, and continued throughout his life, combined with other rare and transcendent powers of mind.

Extraordinary calculators have, from time to time, astonished the world, with the exercise of this power of mentally combining and retaining figures; but, one by one, they have disappeared from the stage, and no superior mental excellence, evinced in after-life, has drawn them again from their obscurity. None of these prodigies have ever been able or willing to explain the process by which they accomplished their object. In the book before us an exception is, however, made in this respect, in favour of Master Noakes, who 'appeared to be as much pleased to explain, as he was to astonish his hearers by the rapidity of his calculations.' Several examples are given of his acuteness and ingenuity in simplifying his operations; and his clear manner of explaining evinces a degree of intellect very far beyond that possessed by many of his predecessors, who appeared more to resemble calculating machines, than reasoning beings.

The pupils of the Edinburgh Sessional School are described as having attained to a surprising facility in mental arithmetic:—

‘Three or four of the best arithmeticians one day calculated mentally, and pronounced correct answers, in twenty minutes, to 147 questions, put to them out of a ready reckoner!’—p. 83.

This is, indeed, a startling paragraph. Mr. Smith does not profess to have been present at the miraculous performance; but he sets it down, without advancing anything against its probability. We hope that it is a misprint. Credulity itself must hesitate to admit so astounding a fact. We should regret any circumstance that would prevent our willing credence of the other statements given concerning this school.

A short sketch of a system of mnemonics concludes the volume. In this part the author does not profess to advance anything original, but his ideas on the subject are rational and judicious,—perhaps the execution does not merit equal praise.

The ordinary method of taxing the memory, in learning what is called *tasks* or rules by rote, deservedly receives Mr. Smith's strong reprobation; and were his usefulness limited to only this one particular, it would entitle him sufficiently to be placed among the zealous and enlightened who are at work in the great cause of education. In his lectures,

‘He lays it down as a principle, that tasks ought never to be imposed, when the matter intended to be impressed on the memory, can be so impressed by ordinary instruction, or by reasoning on general principles. Mere tasks learnt by rote attach only to the memory, and by such tasks the memory would indeed be overburdened, if it did not relieve itself by suffering its stores to escape; that is, by forgetting the unintelligible, and, therefore, unwelcome lumber which oppressed it. Ask any well-educated person how many of those things his memory retains which were only committed to it by means of tasks; and then contrast the scantiness of his recollections of those things with the abundance and freshness of his impressions of principles and facts, in the reception of which his judgment or fancy has been engaged.’

Again :

‘If persons took one-tenth of the pains in attending to general *principles*, which they employ in committing to memory, not only would their knowledge be more extensive, but their minds more active and efficient for all the various purposes of our nature.’—pp. 87, 88.

The memory must, however, be sometimes called in requisition, in cases which appear to lie within its province alone. It is useful to recollect facts chronologically, and to arrange them in due order, within the store-house of our mind; by this means clear ideas are always retained of the course of leading events—of the progress of society—and of

the contemporaneous periods of the different nations of the world. There can be little doubt that much assistance may be given to memory, even in its peculiar department, by associating with it, as an auxiliary, some other power of the mind ; thus, an acquaintance with dates may be acquired with facility, and obtain a permanent place in the mind. To devise some means of affording this assistance is the business of mnemonics. It is evident then, that in arranging a system for this purpose, an association with the reason or the imagination should be obtained in the most simple and natural manner. Many words should not be crowded on the memory for the better recollection of one, and whatever words are to be remembered, in order to recall the date, should certainly comprise good sense and good English. These desiderata have rarely been found in any systems of mnemonics. The machinery has in general been too complicated and uninteresting, burdening the memory with an overpowering quantity of extraneous nonsense, which, one would imagine, required a greater effort of the memory for its retention, than the recollection of a few dates.

For these reasons, Grey's 'Memoria Technica,' however ingenious, presents insuperable objections to the general adoption of his method ; and we believe there are comparatively few, who have ever, to any useful extent, availed themselves of the numerous tables found in his elaborate work.

Feinagle's System of Associations, by which, a few years back, so many fancied that they were becoming miraculously wise, is now entirely sunk into oblivion ; and perhaps there is not one person among all that composed his numerous classes, who retains one distinct idea, obtained in consequence of attendance upon his lectures. In general, the artifices employed for impressing numeral facts on the mind, have not been sufficiently attractive to invite to their extensive adoption. We do not think that the sketch before us is at all calculated to obtain greater favour.

In all the systems of mnemonics, wherein words are employed, the fundamental principle is, that of making a certain number of letters symbolic of the respective figures 1, 2, 3, 4, 5, 6, 7, 8, 9, 0. Dr. Grey assigned this office to the vowels, as well as the consonants ; hence his choice of words was limited, and, in consequence, those combinations were formed of uncouth sounds, which deterred the student from attempting to make himself familiar with them.

Consonants alone are used in the system under examination ; by which plan correct words may be formed. But we think that there is here a needless complication, and that the memory is called upon to make a greater effort than is ne-

cessary, for merely giving to each figure its peculiar representatives. Ten unconnected incongruous words, such as ‘*magi*,’ ‘*raze*,’ ‘*cook*,’ &c., must each, in its proper place, be associated with the different digits.

The arrangement of letters being made, it remains to combine them together in words for the formation of certain numbers to be remembered, as naturally, in as few words, and in as good language as possible, consistent with producing an association in the mind. The examples in the present work are lamentably deficient in all these particulars. For the purpose of remembering the dates of accession of each of the kings of England, two lines of—we cannot call them poetry, nor scarcely do they deserve the name of rhyme—but two lines of wretched doggrel are recommended to be committed to memory, in order to recollect the concluding word in which the date is conveyed. Better would it be never to have the mind stored with these useful dates, than to have so much accompanying useless absurdity, and thus run the risk of spoiling the pupil's taste for the beauties of poetry, in endeavouring to learn and retain such an insufferable jingle. Two specimens of these couplets will perhaps be quite sufficient to prevent the rest from being perused:—

‘ For no man did *Henry the Eighth* care a wisp,
And so fat he became that he scarcely could *lisp*.’

509

‘ Elizabeth, ev'n when in years rather mellow,
Conceived herself lovely, though wrinkled and *yellow*.’

558

There is a fault in the arrangement, as well as in the execution of this system. The letters representing the figures are contained in one word, whereby the power of introducing it with propriety is very circumscribed. By causing only the initial letter of each word to form the date, a much wider scope is at once given to ingenuity in constructing an appropriate sentence.

In a small unpretending little book published a few years ago, and entitled ‘A System of Chronology,’ by Mrs. John Slater, this plan is practised with great advantage; while the letters are so simply associated with the numbers, that the preliminary step of learning these may, without difficulty, be acquired in five minutes. By the above method sentences are constructed, having some marked reference to the circumstance, the date of which is to be remembered. For example, the date of the death of Socrates is known by recollecting the sentence—‘*Rest, sage Socrates.*’ The period of the death of Newton is shown by the following:

‘*The great Newton* ¹*buried.*’ Every useful date is, through this contrivance, readily acquired by children, without being made an irksome task; indeed, it is rather a matter of amusement to them, to exercise their ingenuity in forming sentences for themselves.

We cannot close this article without expressing a sincere hope that Mr. Smith will continue to give his valuable assistance towards demolishing the pernicious systems by which education has heretofore been enslaved, and replacing them by rational and enlightened methods of expanding the youthful mind, and leading it on to the love of knowledge and virtue.

MISCELLANEOUS.

SWITZERLAND.

THE JESUIT COLLEGE AT FREIBURG—A DIOCESAN VISITATION.

‘Geneva, 1830.

‘I made an excursion to Freiburg, in the month of June last, at the invitation of a friend here, who was going to place one of his sons in the Jesuit Seminary ; and I took some pains to become acquainted with it in all its parts. Conceive a spacious edifice, forming an oblong square, with four stories above ground, and *four hundred and ninety-eight windows* ; and, conceiving this, how is it possible further to conceive that it should labour under a *deficiency of light*? This stately mansion lies, like a citadel, on the highest ground in the town. On our entrance we were received by a servitor in the sable livery of his order ; there was much of courtesy in his address. As soon as we had crossed the threshold, the double iron wicket behind us was instantly closed, and our cicerone delivered himself of a loud rap or two against the knocker of the door. Forthwith it was answered by two young “Jesuit Fathers,” whose office it was to show strangers round the establishment. Away, then, we were hurried with almost breathless velocity through a host of broad, well-lighted, cleanly corridors ; ever and anon stopping a second to recover our wind and take an admiring glance at the order and comfort which pervaded the kitchens, dining-halls, and larders ; for there is not a nail or peg but what is kept as clean and perfect as in a palace. The interior is arranged with so much tact that nothing which passes can escape the observant eye. Our next visit was to the playgrounds and gardens, where the pupils were enjoying themselves right lustily : had the weather been bad they would have taken refuge in the apartments allotted for their recreation ; and what, think ye, these contain? Billiard-tables, a pretty theatre, a bazaar stocked with every sort of toy and plaything ; in short, nothing was wanting which youthful thirst for amusement can put in requisition. A tone of gentleness and benevolence seemed, even when the classes were under tuition, the universal order of the day ; nor would it be easy for a superficial observer to detect the keen and unintermitting vigilance with which the teachers watch their pupils ; not one word, or motion, or change of feature passes unheeded ; the most trivial occurrence is entered into a book with scrupulous accuracy ; and, with this book at his elbow, the scholar is summoned every evening to render an account of the day’s occupation. Woe betide the hapless urchin who shall treat a fault with slight, or show himself ashamed to bring it out. This wakefulness is carried with so high a hand, that the very words which a boy utters in the unconsciousness of slumber are carried to book ! In spite of sweet looks and honeyed words, nothing can exceed the harsh and inexorable

manner in which chastisement is inflicted. But I should not have quarrelled with this, had I not found the seminary at least two centuries behind its contemporaries in its scholarship: for, in history, its oracle is old Father Loriquet—in natural history, the Abbé Nollet—in Greek, fragments from St. Basil and St. Gregory—and in French literature, here and there a fable or some mortuary oration. As for mathematics, canon law, or philosophy, the least said the soonest mended. It would, however, be unjust not to quote the exception to the rule; they have a Flemish Abbé here, who holds the appointment of professor of chemistry and natural history, and goes by the name of the Père Physicien; and he is, indeed, the only academical functionary whose talents and acquirements do honour to the institution. So little do the generality of parents look into these matters, that there were no fewer than three hundred youths beneath its roof two years ago; and parents must not take credit for improved concern in this particular, even though the number has at present dwindled down to one hundred and thirty. Two-thirds are natives of the canton itself (Freiburg); the remainder are exotics from France, Belgium, Savoy, and the Swiss cantons; and those from the first-mentioned kingdom are, without almost one exception, from country towns. It is the practice here, and indeed in every other Jesuit school, to avoid no artifice, however degrading, which offers a chance of attaching such pupils to the Order as give evidence of a temper or of natural endowments fitted for its purposes, or are calculated, from their rank or connexions in society, to forward its interests. This was the motive which advanced young Count Stollberg to the dignity of a teacher last year.

‘On our return we fell in with the Bishop, who was coming back from inspecting his diocese. He was travelling in company with his Chancellor and a member of the Freiburg Council, whose office it is to examine the parochial registers. Every parish has to pay this “Prince of the Holy Empire,” as he styles himself, sixteen Swiss francs (about 18s.), besides half as many to the councillor, and two to the horseman *en chef*, who escorts them. The expenses of his Highness’ journey and victualling cost each parish sixty-four francs, and the sum levied on the whole canton is, therefore, no less than seven thousand one hundred and sixty-eight francs, or 130*l.* We must add to this, the military parade with which he is accompanied and greeted; the festivities, banquets, &c., which mark his progress. These matters cannot be had without a large outlay; and the charge of the whole tour could not, as I was assured, fall much short of six or seven hundred pounds.’

GERMANY.

LEIPZIG.—During the existing summer semester no fewer than 122 individuals, regularly admitted by the University Council, (namely 35 ordinary and 24 extraordinary professors, and 63 lecturers,) have announced their intention of giving courses: these will consist of 12 in theology, 45 in jurisprudence, 33 in physic, and

32 in philosophy. Notwithstanding this abundant supply, it is a subject of complaint that many branches of science are very scantily, and some not at all provided for.

A very useful and tolerably complete description of the past and present constitution of this University has lately appeared, under the title of 'Die Universität Leipzig in der Vergangenheit und Gegenwart von C. C. C. Gretschen. Dresden, Hilscher, 1830.' Though the author has treated principally of the *external* condition of the University, yet this is still the best book for giving a person a knowledge of the nature of the Saxon Universities.—*Jahrbüch. Seebode.*

BONN.—The number of students who have frequented this University during the winter session 1830-1831, has been 884, exclusive of 93 foreigners.

The matriculations in Theology (Protestant) were 116	
Theology (Catholic)	271
Law	232
Medicine	134
Philosophy, &c. . . .	112
Various (but immatriculated)	19

UNIVERSITY OF JENA.—Professor Schröter was installed in the Pro-Rectorship on the 5th of February last. During his predecessor's discharge of that office, 151 students quitted the University, and 123 entered it. On the 6th of February the number present was 556, of whom

249 were students in Divinity,	
174	Jurisprudence,
71	Medicine,
62	Philosophy.

UNIVERSITY OF WURZBURG.—We learn from an official enumeration of the officers and students of this University, which has been published for the first time during the preceding winter, that the number of students present at the commencement of the winter session 1830-1831, was 605, and of these 409 were Bavarian subjects, and the remainder foreigners, their classification being as follows:—

Theology	159
Law	99
Physic	230
Philosophy	117

On the 11th of March last died, at Pesth, *Charles von Kisfaludy*, the celebrated Hungarian poet, in his fiftieth year; and on the 20th of the same month, at Erlangen, *C. F. von Glück*, the veteran of German jurists, and professor of law to the University of Erlangen, in his sixty-sixth year. Scarcely thirty minutes before his decease, this indefatigable scholar was busy correcting his commentary on the *Pandects*.

GREECE.

The 'Orphanotrophion' at Egina is one of the first establishments which have been founded by the present government; it is a spacious edifice, forming an oblong square, the principal entrance to which is from the west. It affords education to the children, whom the French government have redeemed in Egypt, as well as to the offspring of indigent parents. Its present number of pupils is about three hundred. They are instructed in the elementary branches of education, and afterwards taught the mechanical arts under some other roof. Ancient Greek forms part of the course laid down. In other spots, the government have likewise appointed as many as forty-eight professors of that language, who have 2386 pupils under their care. There are sixty-four schools, where the system of mutual instruction obtains; and they are frequented by 5418 pupils.—As a member of the French Philhellenic Society, I considered it my duty to visit several of these schools, and I am bound to notice, in an especial manner, the excellent state in which I found those of the islands of Tino, Syra, Poros, and Naxos. M. Mustoxidi, a Greek of Corfu, whose works have entitled him to the honour of being appointed a corresponding member of the French Institute, is the Ephor of the 'Orphanotrophion.' Through his zealous instrumentality, a museum has been formed in it, which contains numerous archaeological remains, brought together from various parts of Greece. Independently of a considerable number of inedited inscriptions, we observed several beautiful Santorin vases, the statue of a sphinx, a variety of basso-relievos, gold jewellery, and a few bronze and terra-cotta figures.—*Gauttier d'Are's Recollections of Greece in the year 1830.*

IONIAN ISLANDS.

RETURN of the number of Scholars of the Ionian University, and the Secondary Schools in the United Ionian Islands, from the promulgation of the new Regulations, to the month of January, 1831.

Island.	Feb.—July, 1829.	Oct. 1829—July, 1830.	Oct. 1830—Jan. 1831.
Corfu, University . . .	76	60	62
— Secondary School . . .	75	69	81
Cephalonia, Second. Schools	89	78	77
Zante	85	90	100
St. Maura	76	58	52
Cerigo	64	56	54
Ithaea	55	45	55
Paxo	43	33	33
Total	563	489	516

The scholastic year begins October 1, and ends July 31.

RETURN of the number of Scholars in the Ionian University, and in the Preparatory School at Corfu, from their first establishment under Frederic, late Earl of Guilford, till the month of August, 1828.

Maintained by

1823, 4	$\left\{ \begin{array}{l} A \ 14 \\ B \ 34 \end{array} \right.$	10	16	40	23	2	7	8
		3	6	43	43	0	0	0
1824, 5	$\left\{ \begin{array}{l} A \ 22 \\ B \ 62 \end{array} \right.$	21	39	82	48	8	10	16
		26	13	101	70	28	1	2
1825, 6	$\left\{ \begin{array}{l} A \ 79 \\ B \ 61 \end{array} \right.$	70	71	220	150	27	17	26
		60	22	143	93	44	3	3
1826, 7	$\left\{ \begin{array}{l} A \ 69 \\ B \ 94 \end{array} \right.$	78	67	214	105	39	31	39
		82	34	210	159	47	3	1
1827, 8	$\left\{ \begin{array}{l} A \ 44 \\ B \ 105 \end{array} \right.$	70	65	179		46		
		58	40	203		50		

A University. b Preparatory School, 'Εφηβεῖον. The scholastic year for the University began November 15, and ended June 31; for the School, November 15, and ended August 15.

	Chairs.	Professors—Univ. Corfu.	Native of
Law	• . . .	Dr. Pasquale Carusus	Cephalonia.
Divinity	• . .	Dr. Girolamo Santorio	Naples.
Moral Philosophy	•	Rev. Dr. Constant. Tipaldus	Cephalonia.
Greek	• . .	{*Rev. Deacon Neophytus}	Scio.
Latin and Italian	• .	Bambas . . .	
English	• .	Dr. Constantine Asopius	Greece.
Pure Mathematics	• .	Dr. Gaetano Grassetti	Rome.
Mixed Mathematics	• .	W. Thistlethwaite, M.A.	England.
Experimental Philosophy	• .	†Dr. John Carandinos	Cephalonia.
Chemistry	• . .	†W. Thistlethwaite, M.A.	England.
		Dr. George Therianos	Zante.
		§Dr. Athanasius Polites	Sta. Maura.

There are nineteen young men in the Ecclesiastical Seminary. Two have been lately examined, and have obtained their diploma in divinity.

There is a central School in each of the islands, and two in Cephalonia, at Argostoli, and Lixuri. The master of each of the central schools inspects the village schools every three months. Slates, pencils, desks, and benches, with a few books, are supplied by the public, under certain conditions.

* Rector of the Ecclesiastical Seminary.

† Ephorus of the University.

‡ Secretary to the Commission for Public Instruction.

§ Inspector of the Mutual Instruction Schools.

MUTUAL INSTRUCTION.

Islands.	Number of Schools.	Number of Scholars.
Corfu . .	23 . .	914
Cephalonia . .	26 . .	958
Zante . .	49 . .	1459
Santa Maura . .	11 . .	382
Ithaca . .	7 . .	475
Cerigo . .	5 . .	194
Paxó . .	4 . .	173
Total . .	125	4555

UNITED STATES.

PROVISION FOR SCHOOLS.—In an article on Legislative Provision for Schools, in the 'American Annals of Education,' of January last, it is remarked, that the modes which have been adopted in the United States for the support of schools may be reduced to three:—1st, funds; 2d, taxation; 3d, a combination of both.

Connecticut and Rhode Island have adopted the first plan. The fund of Connecticut amounts to about 1,700,000 dollars, a considerable sum for so small a state; but it is the opinion of the best judges that the actual influence of this fund is injurious. New Hampshire, Massachusetts, and Vermont, have always maintained the plan of taxation. Vermont has a small fund, but no aid has yet been afforded by it to schools. New York has combined both plans. By the last report it appears that the New York fund is 1,661,081 dollars, which is somewhat less than that of Connecticut. It is estimated that the available part of the fund pays only one-tenth of the annual expenditure on the common schools; another tenth is assessed on the taxable inhabitants of the towns respectively; and the two-tenths, thus made up, constitute what is called the school monies. Something less than two-tenths is raised by a tax on the property in the districts, and the remaining nearly six-tenths, or 600,000 dollars (the whole expense being 1,000,000 dollars), is paid by the parents and guardians of the scholars.

Since the revision of the New York common school system, which was not in full operation till 1821, the average annual increase of children between five and fifteen has been about 16,500; and the average increase of the number of scholars instructed has been about 20,000 a year for the last ten years. In 1830, the number of children between five and fifteen years of age in the districts which made returns was 468,257; while the number of children actually instructed in those districts was 480,041. During the single year 1828, 311 new school districts were formed.

Schwartz, one of the most eminent writers on education in Germany, observes, in his 'History of Education,' that the state of New York has the greatest number of children in its schools in proportion to the whole population of any country that he has found.

The state of Maine has a very simple plan for providing for the

schools. They have no fund whatever, but oblige every district to raise, for the purposes of education, a sum proportioned to the number of its inhabitants or its property. If a town or district neglects to do this it is liable to a fine.

The following tabular view is taken from the 'Traveller and Monthly Gazetteer,' published at Philadelphia, June 1828.

Newspapers published in the United States in the year 1775; ditto, in 1810; and newspapers and periodicals in 1828:—

Maine	"	.	"	.	29
Massachusetts	7	.	32	.	78
New Hampshire	1	.	12	.	17
Vermont	"	.	14	.	21
Rhode Island	2	.	7	.	11
Connecticut	4	.	11	.	26
New York	4	.	66	.	161
Jersey	"	.	8	.	22
Pennsylvania	9	.	71	.	185
Delaware	"	.	2	.	4
Maryland	2	.	21	.	32
District of Columbia	"	.	6	.	9
Virginia	2	.	23	.	34
North Carolina	2	.	10	.	15
South Carolina	3	.	10	.	16
Georgia	1	.	13	.	13
Florida	"	.	1	.	2
Alabama	"	.	"	.	10
Mississippi	"	.	4	.	6
Louisiana	"	.	10	.	9
Tennessee	"	.	6	.	8
Kentucky	"	.	17	.	23
Ohio	"	.	14	.	69
Indiana	"	.	"	.	17
Michigan	"	.	"	.	2
Illinois	"	.	"	.	4
Missouri	"	.	"	.	5
Arkansas	"	.	"	.	1
Cherokee Nation	"	.	"	.	1
 Total	37	.	358	.	827

The great majority of these are weekly papers; some, however, are published twice and thrice a week; and in the large towns of Boston, New York, Albany, Philadelphia, Baltimore, and some other places, there are daily papers, one or more. New York has twelve daily papers, and Boston four.

In the city of New York there is one French paper, and one Spanish paper, published weekly.

In the state of Pennsylvania there are twenty-two weekly newspapers in the German language, and also several German news-

papers in the state of Maryland. There are two German papers in Ohio. One daily French paper is published at New Orleans, Louisiana, besides one or two more in that language.

The Cherokee Indians (state of Georgia) have a newspaper printed in their own language, and also partly in a newly invented character.

The following extract, which we do not recommend as a model of style, contains something which is of much higher value than fine words—the results of certain experiments in education, which deserve the attention of all parents and teachers.

The *New York Evangelist* furnishes a report of the Manual Labour Academy of German Town, from which we extract the following passages:—

The institution is in a prosperous condition. It now contains twenty-three pupils, and an accession of ten is expected at the opening of the new term. The main building has been altered so as to accommodate thirty-seven pupils, and a new workshop has been erected. The farm, also, during the last six months, has been under improvement. All the fences have been cleared of weeds and brambles; fifty loads of soil taken out from a principal drain; about one acre of wild swamp land, flooded from an accumulation of soil on the margin of a brook, which runs through it, has been drained by several ditches, so as to afford a crop of buck wheat; four acres, at the north extremity of the farm, neglected for some years, have been fallowed, cleared, and sowed with wheat; and a half acre, contiguous to the barn, has been enclosed by thirty pannels of post and rail fence, and converted into a very productive culinary garden. The institution has three officers, a principal, an assistant teacher, and a farmer. The pupils who are now in the academy differ from each other in almost every particular; their ages vary from fifteen to twenty-eight years. One is from Massachusetts, two from New York, two from New Jersey, thirteen from this state, of whom nine are from the city. Seven of the pupils are beneficiaries, nine are supported by parents or guardians, and three are dependant on their own resources. With the exception of six of them, their constitutions are good. Three have been afflicted with intermittent fevers. But the complaints common to students—the effects of the studio-sedentary habit—do not exist among them. On the contrary, one, who entered sickly, has now health and strength; another, who was so indisposed as to be unfit for labour or study, is now capable of both; and a third, who had dyspeptic attacks from study, now prosecutes it with manual labour, and enjoys good health. Fifteen of the twenty-three have the ministry professedly in view. The studies of these pupils are the same as in other academies or seminaries; but the hours of recreation are not the hours of waste and idleness, and, as it is too often, of immorality. Four hours daily, at the least, have been employed in useful bodily labour by every student. And by the profits of this labour, they have not only more or less defrayed their own expenses of

education, but have established their health and increased their strength both of body and mind, and made them rejoice in both. Their skill has been called into exercise. They are becoming dexterous, as well as intelligent and moral. The head, the heart, and the hands, are all educated, and the pupils thereby fitted for the vicissitudes of life; particularly so, if any of them be destined for our new settlements as christian missionaries, and more particularly so, since now no parent, by patrimony or influence, can secure the destiny of his son amid the turnings and overturnings of nations, and families, and individuals. A complete education is the only sure rock.

‘Eighteen months ago, the plan of uniting academic studies with useful and systematic bodily labour, appeared to us as an impracticable scheme, unsanctioned by the example of old institutions of learning, and incompatible with a student’s life. And now there are already ten manual labour institutions in operation throughout this country, and others about to be established. The facts which they afford demonstrate that this manual labour system—the same, indeed, which Franklin and such men personally adopted, and which was no novelty to the Persians, the Greeks, and to the Jewish people—which Paul at Corinth experienced the benefit of—is one which will also enable an entire community, and the world, to educate themselves. The health-preserving and life-saving labour of the hands, defrays the expenses of education. Youth of genius and piety, born in poverty, need far less the arm of charity to conduct them to public usefulness. Time and effort are almost all they require. Parents have less of the overreaching anxiety to accumulate means for the education of their sons: the muscles deposited in broad and numerous layers on their bones is a patrimony to each one of them for this object. And the day-labourers may be informed, that the same power which he expends in toil, is, in his boys, a receipted school-bill.’

From the ‘American Annals of Education,’ January 1831, we learn that similar establishments are forming in various parts of the United States; ten schools or academies of this class are in actual operation. Particular instances are mentioned in which the profits of the student’s labour go far towards defraying their expenses, while their health is also improved, and their proficiency in their studies consequently accelerated.

In a climate like our own, so favourable to bodily exertion, such a plan as this modified according to circumstances would contribute most materially to the physical and moral improvement of all classes, and particularly of the wealthier, if they could be brought to adopt it.

JAMAICA.

JAMAICA-ITINERATING LIBRARIES.—At the request of Mr. Samuel Brown, we publish the following extract from a letter of his on the subject of itinerating libraries:—‘In the “Journal of Education,” No. II., the writer of a notice on the Itinerating Libraries, appears,

as well as some other friends, to have greatly mistaken the class of persons for whose use these libraries are principally sent,—viz., the white and free-coloured population of the island, who alone can be expected to pay for the use of the books. The disposition to read has been so much excited in one part of the island, that the gentleman to whose care one of the divisions has been sent, anticipates about forty annual subscribers of one and a half dollar. This would enable me to send a new division of fifty volumes next year, as the whole subscriptions and donations, after defraying the local expenses, will be employed for this purpose.'

RUSSIA.

DORPAT.—There are at present 580 individuals engaged in study at this university; 437 being natives of the adjoining provinces of Livonia, Esthonia, and Courland, and the remainder, 143, being from other parts of Russia. They class as follows:—55 are students of divinity, 64 of jurisprudence, 252 of medicine, and 209 of the various branches of philosophy.—7th May.

GEORGIA.—On this country becoming a Russian province in 1802, the government established a school at Tiflis, which, in 1804, was changed into a foundation for the education of the nobles, from which eight pupils were to be sent yearly to the University of Moscow, to complete their studies. In 1807 it was changed into a gymnasium of four classes, and the plan of instruction was modified by General Yermoloff in 1819, so as to comprise, instead of instruction in Latin and German, the Tartaric language, which is the prevailing tongue there. He also added some branches of military instruction. The establishment contained about 300 pupils during each year, but was still only a place of education for the Georgian nobility. But in May, 1830, the government established in the province, instead of this school, one gymnasium at Tiflis, and twenty district schools. To the gymnasium, which, at its opening, received 298 pupils, there are attached exhibitions or allowances from the state, to maintain 40 pupils, children of the nobles, officers, and functionaries.—*Jahrbüch. Seebode.*

B R I T I S H.

THE UNIVERSITIES—*Oxford.*—In a Convocation holden on March 26, the following Public Examiners for the ensuing year were unanimously approved of:—*In Literis Humanioribus*—Rev. the Principal of New Inn Hall; Rev. R. D. Hampden, M.A., late Fellow of Oriel College; Rev. J. Carr, M.A., Fellow of Balliol College. *In Disciplinis Mathematicis et Physicis*—Rev. the Savilian Professor of Geometry; Rev. A. P. Saunders, M.A., Student of Christ Church; Rev. R. Walker, M.A., Tutor of Wadham College.'

April 13.—A Convocation was held for the admission of Proctors

for the ensuing year; viz. the Rev. D. Veysie, M.A., Student and Senior Censor of Christ Church, as Senior Proctor; and the Rev. R. M. White, M.A., Fellow of Magdalen College, as Junior Proctor. Mr. Veysie was presented by the Very Rev. the Dean of Christ Church, and nominated for his Pro-Proctors the Rev. J. Williams and Rev. A. Short, Masters of Arts of Christ Church. Mr. White was presented by Doctor Daubeny, Vice-President of Magdalen, and nominated as his Pro-Proctors the Rev. J. Linton and F. J. Parsons, Masters of Arts of Magdalen.

May 25.—This being the first day of Act Term, the Rev. H. D. Harington, M.A., Fellow of Exeter College, the Rev. R. Biscoe, M.A., Student of Christ Church, and the Rev. E. Higgins, M.A. of Brasennose College, were nominated Masters of the Schools for the year ensuing.

June 2.—The Chancellor's and Sir Roger Newdigate's prizes were adjudged as follows. *Latin Verse*—‘Numantia;’ R. Palmer, Scholar of Trinity. *English Essay*—‘On the Use and Abuse of Theory;’ C. P. Eden, B.A. of Oriel. *Latin Essay*—‘Quenam fuerit Oratorum Atticorum apud Populum Auctoritas;’ C. Wordsworth, B.A., Student of Christ Church. Sir Roger Newdigate's prize for *English Verse*—‘The Suttees;’ P. M. Ashworth, Commoner of Wadham.

June 9.—The judges of the Theological Prize having awarded it to B. Harrison, B.A., Student of Christ Church, the Essay was read before the University in the Divinity School.

The following subjects are proposed for the Chancellor's Prizes for the ensuing year:—For Latin Verse—‘Attila.’ For an English Essay—‘The Study of different Languages, as it relates to the Philosophy of the Human Mind.’ For a Latin Essay—‘De Stoicorum Disciplina.’ Sir Roger Newdigate's Prize English Verse—‘Staffa.’

Theological Prize.—On ‘The fulness of Time’ at which Christ appeared on Earth.

The names of those Candidates who are admitted by the Public Examiners into the four Classes of *Disciplineæ Mathematicæ et Physice*, according to the alphabetical arrangement in each Class prescribed by the statute, stand as follow:—*First Class*—T. D. Ackland, Christ Church; C. Balston, Corpus Christi College; W. Boyd, University College; R. Browne, St. John's College; A. Perkins, Oriel College; T. Simcox, Wadham College. *Second Class*—G. Kempe, Exeter College; H. Randall, Queen's College; R. Wilson, Oriel College. *Third Class*—H. Moncrieff, New College; J. Richards, Corpus Christi College. *Fourth Class*—E. Goslen, Magdalen Hall; A. F. M'Geachy, Balliol College. *Examiners*—B. Powell, R. Walker, A. P. Saunders.

Cambridge, March 10.—The Chancellor's gold medals for the two best proficients in classical learning among the Commencing Bachelors of Arts were adjudged to J. Williams Blakesley, of Trinity College; and W. H. Hoare, of St. John's College.

At a congregation on March 9, a grace to the following effect unanimously passed the Senate:—

‘ To petition the King, that if it should be His Majesty’s pleasure to comply with the prayer of a petition lately presented to His Majesty, for a Charter to incorporate, under the title of “ The University of London,” the proprietors of an institution recently founded there for the general advancement of literature and science, a clause may be inserted, declaring that nothing in the terms of the charter is to be construed as giving a right to confer any academical distinctions designated by the same titles, or accompanied with the same privileges, as the degrees now conferred by the Universities of Oxford and Cambridge.’

April 14.—The following gentlemen of Trinity College were elected Scholars of that Society:—

West, Ellis, Chapman, Dobson, Hawtrey, Webster, G. Williams, Morrison, Hankinson, Lydekker, Boteler, J. H. Brown, C. J. F. Bunbury, E. H. Bunbury, Kemplay, Fowler.

Westm. Scholars.—Latimir, Eales, Wrottesley.

May 28.—The Chancellor’s medal for the best English poem was adjudged to G. S. Venables, Scholar of Jesus College. Subject—‘ The Attempts which have been made of late years by Sea and Land to discover a North-west Passage.’

June 1.—At a Congregation a grace passed the Senate, to re-appoint the Syndicate to inquire whether any and what alterations can be made with advantage in the present mode of examining the candidates for mathematical honours, and to report to the Senate before the end of next term.

Trinity College Examination, June 10.—Alphabetical list of the first classes. *Senior Sophs*—Hamilton, Hawtrey, Heath, Webster, West. *Junior Sophs*—E. Bunbury, Boteler, Brown, Caton, Feacheim, Fowler, Hankinson, Kemplay, Loder, Phelps, Wright. *Freshmen*—Birks, Donaldson, Forsyth, Gooch, E. Hoare, A. Houlton, Johnstone, Leathley, Marsh, Morison, G. P. Phillips, Pryor, Selwyn, Stevenson, W. D. Watson, Wright.

June 17.—Sir William Browne’s gold medals of this year are adjudged as follows:—J. Hildyard, Christ College. Subjects—Greek Ode ‘ Granta Illustrissimo Regi Gulielmo quarto gratulatur quod in Solium Britanniae successerit.’ Latin Ode, ‘ Magicas accingitur artes.’ Greek Epigram, ‘ Magnus inter opes inops.’ Latin Epigram, ‘ Prudens simplicitas.’

Person Prize (for the best translation of a passage from Shakspeare into Greek verse)—G. Kennedy, St. John’s College. Subject—*As You Like it.* Act II. Scene I. beginning, ‘ To day my Lord of Amiens and myself,’ &c. And ending, ‘ Native dwelling-place.’

Member’s Prize for Bachelor of Arts:—J. Spedding, Trinity. Subject—‘ Utrum boni plus an mali hominibus et civitatibus attulerit dicendi copia?’ No second prize awarded.

Members’ Prizes for Undergraduates:—1. W. H. Thompson, Trinity College; 2. H. Alford, Trinity College; Subject—‘ Utrum fides Punica ea esset qualem perhibent scriptores Romani?’

LONDON UNIVERSITY.—On Saturday the 21st of May, at a public meeting, Sir Thomas Denman, M. P., in the Chair, the following Prizes were distributed:—

JULY, 1831.

CLASS OF MIDWIFERY.—*Gold Medal and First Certificate*—Mr. Peter Martin, of Reigate, Surrey.—*First Silver Medal and Second Certificate*—Mr. Thomas Howitt, of Lancaster.—*Second Silver Medal and Third Certificate*—Mr. Peter Hulme Edge, of Salford, Manchester.

CLASS OF ANATOMY.—*Gold Medal and First Certificate*—Mr. James Long of London.—*First Silver Medal and Second Certificate*—Mr. Joseph Thompson, of Colston Bassett, Notts.—*Second Silver Medal and Third Certificate*—Mr. Richard Wakefield, of London.

CLASS OF GENERAL ANATOMY.—*Gold Medal and First Certificate*—Mr. Robert Grueber Shute, of London.—*First Silver Medal and Second Certificate*—Mr. John Storrar, of London.—*Second Silver Medal and Third Certificate*—Mr. John Bolton Hodgson, of Burton Latimers, Northamptonshire.

CLASS OF THE NATURE AND TREATMENT OF DISEASES.—*Gold Medal and First Certificate*—Mr. Thomas Eden, of Liverpool.—*First Silver Medal and Second Certificate*—Mr. Robert Docksey Goodwin, of Ashbourne, Derbyshire.—*Second Silver Medal and Third Certificate*—Mr. Peter Hulme Edge, of Salford, Manchester.

MATERIA MEDICA AND THERAPEUTICS.—*Gold Medal and First Certificate*—Mr. David William Nash, of Bristol.—*First Silver Medal and Second Certificate*—Mr. J. N. Hudleston, of London.—*Second Silver Medal and Third Certificate*—Mr. Frederick Edmonds, of Penzance.

CLASS OF SURGERY.—*Gold Medal and First Certificate*—Mr. James Long, of London.—*First Silver Medal and Second Certificate*—Mr. Joseph Thompson, of Colston Bassett, Notts.—*Second Silver Medal and Third Certificate*—Mr. David William Nash, of Bristol.

CLASS OF CHEMISTRY.—*Gold Medal and First Certificate*—Mr. David William Nash, of Bristol.—*First Silver Medal and Second Certificate*—Mr. Collings Mauger Carre, of Guernsey.—*Second Silver Medal and Third Certificate*—Mr. Henry Cook, of London.

COMPARATIVE ANATOMY.—*Gold Medal and First Certificate*—Mr. Charles Lemann, of London. *Silver Medal and Second Certificate*—Mr. Robert Garner, of the Potteries, Staffordshire.

BOTANY.—*The Prize and First Certificate*—Mr. Robert Marsh, of Bath.

PHYSIOLOGY.—*Gold Medal and First Certificate*—Mr. Henry Plank, of London.—*First Silver Medal and Second Certificate*—Mr. James Wearne, of St. Ives, Cornwall.—*Second Silver Medal and Third Certificate*—Mr. Peter Martin, of Reigate.

SOCIETY FOR THE DIFFUSION OF USEFUL KNOWLEDGE—*Address of the Committee*, June 4, 1831. In making a Report of their proceedings since the 20th of May, 1830, the Committee have to state, that they have published regularly the numbers of the **LIBRARY OF USEFUL KNOWLEDGE**; of which, in pursuance of their original intention, the greater part have been Historical, eleven numbers only out of twenty-six having relation to Mathematics and the Physical Sciences. The whole number of Treatises of this

series is exactly what it ought to be in three years, being at the rate of two, without any omission, each month.

Of the *LIBRARY OF ENTERTAINING KNOWLEDGE* four volumes only have appeared since the date of the last Report. One cause of this is the difficulty of procuring the Engravings in time. The Committee have taken great pains to insure a more regular publication, and they confidently hope to effect it in future.

THE MAPS have been published at the regular intervals originally designed, and continue to receive from the Public the same encouragement. Lithographed copies, without the names of places, the filling up of which experience has proved to be a most useful exercise for the learner, have been published at the low price of three-pence each, and will be continued.

The Committee have completed one volume of the *FARMER'S SERIES*, the 'Horse,' with a Treatise on 'Draught,' in which they trust that amusement and instruction have been not unsuccessfully combined.

A Map has been published of the Heavens, divided into Six Parts, which supplies to the Students of Astronomy a source of instruction hitherto attainable only at a great expense.

In execution of the design which the Committee announced in their last Report, they have commenced the publication of a quarterly *JOURNAL OF EDUCATION*; and there is no undertaking, in their opinion, of more decided utility, or more precisely consonant with the views entertained by the Founders of the Society. Education, as a science, has been hitherto neglected in England, and no means seem better adapted to promote the cultivation of it, than a fair Review of the Books used in teaching; together with faithful accounts of the various place of Education in the world, and notices of the new and improved methods of acquiring knowledge. The two Numbers of the Journal already published offer an assurance that these objects can be most satisfactorily attained.

The pledge given by the Committee, in their last Report, of preparing Treatises on the Science of Political Economy, has been as yet only very partially redeemed.

A Treatise on Commerce is now in the press; and the Committee cannot refer without pleasure to the occasional Treatises published by them on this subject, 'RESULTS OF MACHINERY,' and the 'Address to Labourers.' The rapid sale of the former, and the unmingled approbation it has received, have induced the Committee to undertake a series of works in the same form and style, which will comprise—

Rights of Industry.

Rights of Property.

Division of Employments.

Exchanges, or Equivalents.

Population (including Poor Laws).

Private Consumption (including Benefit Societies and Savings' Banks).

Public Consumption (including Taxation).

Of the **ADDRESS TO LABOURERS**, which was published to meet a sudden emergency, the organization of the Society enabled them in a few days to prepare, publish, and circulate 20,000 copies through the most useful channels, followed by a sale of more than 12,000 copies besides.

The **Second Part of the Working Man's Companion, COTTAGE EVENINGS**, fulfils the promise made in the last Report, of supplying a useful and amusing publication fitted for those whose previous learning does not extend beyond the faculty of reading. This work will be continued quarterly.

While the Committee express their satisfaction that the Stationer's Company should have adopted in the Englishman's Almanack many of the improvements of the **BRITISH ALMANACK**, they regret that it still gives currency to Moore's Almanack, with all its absurd and mischievous delusions, its astrological and meteorological predictions, its hieroglyphical prophecies, and its enumeration of the parts of the human frame which fall at intervals* 'under the dominion of the Moon' For instance †: 'At this Ingress the situation of δ (Mars) is rather remarkable, for he is not only Lord of the *Imum Cæli*; but also in his own domal dignity, the ascendant of *England*. Hence, when we consider the nature of this anarctic promittor, with his position in the horoscope, as regards the other infortunes, it may be inferred that something of an hostile nature is thereby pointed out. And as the ascendant of *Portugal, France*, and *Germany*, behold the celestial combatants by an unfavourable aspect, augments the danger to these and other places and countries under the fiery trigon by stirring up conspiracies.' The following sentence may be deemed worse than nonsense ‡: 'Be not drawn aside, courteous Reader, by any of the new-fangled inter preters of prophecy concerning the coming of our Lord to reign on earth *literally* with his Saints. 'Tis all a hum, as they understand it.'

The happy effects of the plan of rendering good books generally accessible by their cheapness, have suggested the propriety of extending the sphere of the Society's exertion. The Fine Arts in this country have, till within a few years past, been the exclusive recreation of those who could afford to pay a high price for the gratification of their taste. England had no National Gallery, and Engravings were so dear as to be within the reach of comparatively few persons. A taste for the Fine Arts was consequently rare, and specimens of Painting and Sculpture, displaying an almost barbarous rudeness, were to be found in houses far removed from poverty. Recently this defect has been partially but still very imperfectly removed. The high price of Engravings is artificially kept up, and the Committee have conceived that they may render a useful and acceptable service to the public, by superintending the preparation of a series of Engravings from the portraits of celebrated men, to be accompanied with short biographical notices, four of which, of the size of Lodge's portraits, and as carefully executed,

* Moore's Almanack, 1831, p. 26. † Ditto, p. 45. ‡ Ditto, p. 11.

will be sold for about two shillings and sixpence. It is in contemplation afterwards to publish Engravings from celebrated Paintings, with notices of the artists and the particular work.

The Committee most thankfully acknowledge the assistance which they have derived in various instances from their colleagues in the country, and are happy to state, that in the United States, Paris, the Ionian Islands, and in Norway, they have efficient and zealous correspondents.

The exertions of the Society are still in many respects restricted by the narrowness of their funds. The profit on each of their publications is small, and although care is taken to avoid, as much as possible, all risk by them, the Committee are reluctant to throw on the publishers the chance of loss which may be incurred by works unquestionably useful, but of which the sale may be slow, and ultimately insufficient to repay the expenses. Indeed these considerations have in some instances prevented the Committee from undertaking works, and in others may oblige them to relinquish those already undertaken.

THOMAS COATES, Secretary.

NAVAL SCHOOL.—A want having been long felt by the officers in the Navy of a proper establishment for the education of their sons, with a view to their qualifying them for the naval profession, the requisite instruction being only to be obtained at present at an expense quite beyond the means of the majority, Capt. Dickson, R.N., directed his attention to the possibility of removing the difficulties, and at length, having matured the prospectus of a comprehensive arrangement, by which 200 boys might receive, on easy terms, the advantages of a highly liberal, as well as scientific, education, a preliminary meeting was held on the 29th of April, 1831, the late Sir Joseph Yorke, K. C. B., in the chair, at which several resolutions were passed declaratory of the objects of the meeting, and appointing another meeting for the 14th of June. Accordingly, on that day a second meeting was held, at which Captain Dickson read a report of the proceedings of the Committee, detailing the very warm and general support the plan had received; and he concluded with moving a series of resolutions, of which the first went to state the satisfaction with which the meeting had received the report; the second, the determination of the meeting to adopt the necessary means for raising the requisite funds to support the institution; the third, a proposal that the head master of the school be a clergyman of the Church of England, and a graduate of one of the English universities; the fourth, the necessity of appointing a provisional committee; the fifth, the names of the officers to form that committee; and the last, the thanks of the meeting to His Most Gracious Majesty for the patronage, which he had announced his intention to bestow on this institution.

In the course of the proceedings it was stated that 12,000*l.* would be required for the expenses of erecting a building, toward which 2500*l.* had been subscribed in 25*l.* shares. The annual expense for education and board was estimated at only 24*l.* per year,

and on the accuracy of this estimate being questioned, Captain Dickson read the following extract from a letter which he had received from the Rev. Andrew Reid, the Secretary to the London Orphan Asylum for the Reception of Children whose parents had been in respectable circumstances. The extract was as follows:—
 ‘The object to which you and your friends are looking is a most excellent one, and only requires ordinary prudence and perseverance to accomplish. All that you propose may be fully realized for 23*l.* per child, and the benefits you will confer will be equal to any education which you can obtain at other schools for from 60*l.* to 80*l.* per annum. I state this from what has actually been done in the London Orphan Asylum; our school thrives, the children are happy with us, receive an excellent education, and readily find situations through the friends of the institution on leaving, even without portions; and our costs are less than I have named.’

After some further discussion as to the best mode of forwarding the objects of the institution, the meeting separated.

STATISTICS OF CAMBERWELL.—The following statistical account of Camberwell has been sent us by Mr. Saunders: we shall be glad to receive similar reports from other quarters, if they be as minute and exact as the present.

Camberwell, so called (not the parish): by the census of 1821, the population of the parish was 3053 families, 17,876 souls; adding supposed increase at 50 per cent. is now 26,806.

The district now referred to contains 1,462 houses inhabited by the poor; the whole number of houses inhabited by the same class in the parish is 2419; the poor population in the district is, therefore, about 8500; and the total population, supposing the poor to be equally distributed through the parish, 16,000.

The population in the following years was respectively—in 1789, 3763; 1801, 7059; 1811, 11,309; 1821, 17,876. Extent three-fourths of a mile square.

a. Nothing.

b. Edward Wilson’s Grammar School, founded as per Letters Patent, dated 29th September, 1615.—‘A School-house and divers other houses, and buildings, and lauds, by estimation seven acres.’ Children to be able, on their admission, to read English well, and write legibly—to write as specimen, John xvii. 3; to be taught long-bow, chess, leaping, running, wrestling; to have prayers morning and evening; to pay five shillings and threepence per quarter, and receive rewards of twopence, fourpence, sixpence, and one shilling, according to merit.

The pedagogue to be Master in Arts, and able to make Latin and Greek verses, pious, teaching good literature and manners—during founder’s life, salary to be ten pounds per year, afterwards to receive rents and endowments, and to be at liberty to take children of ‘subsidy men.’ The present master keeps a private school, besides receiving twelve boys on the Foundation, who each pay one guinea per quarter.

Governors—Vicar and Warden of Camberwell, Vicar of Carshalton, Rector of Lambeth, Rector of Newington, Rector of St. Olave's, Camberwell, J. and B. Bowyer, and Scott.

2. COLLEGE OF GOD'S GIFT, Dulwich, founded by Edward Allen, 1619, consists of

Master warden—to be of the name of Alleyn or Allen.

One to perform divine worship.

Four Fellows.	One Schoolmaster. One Usher. One Organist (Layman.)	Unmarried.
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Six Brethren. {Sixty years of age.

Six Sisters. } Sixty years of age.

Twelve Scholars, boys, six to eight years old at admission; educated until eighteen, and then apprenticed or sent to college, where there are always to be

Thirty Out-members.

On death of master, the warden to succeed him.

Warden and fellows to be chosen by lot.

Governors—Churchwardens of St. Botolph, Bishopsgate;

“ St. Saviour;

“ St. Giles, Cripplegate.

Archbishop of Canterbury, visiter.

In 1808 the rents were 3784*l.* per annum, and 5600*l.* had accumulated as a building fund.

c. None.

d. GREEN COAT SCHOOL—founded by P. Cornelison, 1721. A National School attached now contains 173 boys, 86 girls, of whom are clothed 50 " 30 "

2. Day and Sunday Schools connected with an Episcop al Chapel containing 100 boys and 82 girls, of whom are clothed 35 boys from funds, sub-cription; 20 girls from the funds, and 6 from a penny a week subscription.

3. National School, St. George's, 1825; 176 boys, 140 girls. None clothed.

4. British and Foreign Schools, 1812, boys only, containing 60. Each boy paying twopence per week.

5. Green's Row, for 20 girls, 1830.

6. South Street, 30 girls.

All the above managed by Committees.

f. GREEN-COAT, NATIONAL, AND EPISCOPAL CHAPEL.

g. INFANT SCHOOL, 1827, Bowyer Lane, 110 pay 1d. per week
_____, 1829, Edmund Street, 120 " 1d. "

h. SURREY LITERARY INSTITUTION, 1826, Reading Room, Library, and Lectures, 150 Members.

Several private reading or book societies.

All the above supported by subscriptions, except otherwise specified.

The letters *a, b, c, &c.*, refer to the heads of inquiry printed in No. I. of the JOURNAL, p. 7.

PETERBOROUGH SOCIETY FOR GENERAL IMPROVEMENT.—A society has been established at Peterborough, for 'The General Improvement of the Intellectual Powers, the Promoting a Love of Literature, and the Diffusion of Useful Knowledge,' and embracing in its objects the discussion of historical and literary questions, and the formation of an extensive library. Some of the members, also it is stated, will make occasional contributions of papers, in order to form a collection of manuscripts illustrative of the history and antiquities of Peterborough and its neighbourhood, and other compositions of a miscellaneous nature. The society already includes a numerous list of highly respectable members.

SCOTLAND.

DR. BELL'S DONATION.—It is stated in the *Fife Herald* of the 26th of May, that the Rev. Dr. Bell, so well known as the founder of the Madras system of instruction, has just given the sum of 120,000*l.* three per cent. stock, for the establishment of a seminary of education in his native city of St. Andrew's. The gentlemen entrusted with the management of this magnificent donation are stated to be William Haig, Esq., Provost, the Rev. Drs. Haldane and Baird, the two ministers of the city, and Andrew Alexander, Esq., Professor of Greek in the United College. In addition to the above gift, Dr. Bell has also made over to the abovenamed gentlemen a piece of ground which he had purchased from the town of St. Andrew's for the sum of 1100*l.*, intended to form the site of the schools which it is his desire to have erected.

EDUCATION IN THE HIGHLANDS.—According to the last annual Report of the Society for the Education of the Poor in the Highlands, read at the general meeting held at Inverness in October last, and recently published, the schools in their connection are rapidly dispelling the ignorance which has long prevailed in those districts, and are effecting a salutary change in the moral habits of the inhabitants. The number of schools is stated to amount to 511; and they are attended by 37,000 scholars.

FINE ARTS.—A society has recently been established at Paisley, in order to diffuse a taste for, and promote the progress of the Fine Arts. The first object of the society was to procure materials for an exhibition of the works of living artists; and especially to foster native talent. In this they have been successful; and an exhibition of more than two hundred pictures, many of very considerable merit, was opened in May last, and has been very fully attended.

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JOURNAL OF EDUCATION.

EDUCATION AMONG THE WALDENSES.

THE Waldenses, ancestors of the modern Vaudois, were the first people in Europe who, persuaded by their pastors, made regulations, as a community, for public instruction, and who provided that children of every degree should be taught the elementary branches of education. For many ages before the memorable enactment by the Scotch Parliament in 1494, which ordered that the barons and substantial freeholders should send their sons to school, the Waldenses had taken care that the child of the simplest goatherd or swineherd might have access to some school, free of expense. They took the lead in this grand movement, and recommended it by their example, not as an act of charity to be performed by benevolent individuals, but as a duty imperative upon the body at large to contribute towards public instruction.

And who were these Waldenses, who could see their way clearly through the dark and middle ages, and agree upon the expediency of a measure, the advantages of which are only now beginning to be generally admitted? They were inhabitants of three Alpine valleys, in Piemont, and therefore called Vallesi, or 'Men of the Valleys,' by corruption, Waldenses; and they first came into notice by refusing to acknowledge the jurisdiction of the Bishops of Rome, when all the rest of Christendom was submitting to the Papal yoke. Another thing has given them notoriety; they have continued to assert, from time immemorial (and their adversaries could never show the contrary), that they are a pure branch of the primitive church, and that they have never departed from the essential forms and faith of apostolical Christianity. They are the same of whom Sir James Mackintosh makes honourable mention in his History of England. 'With the dawn of history,' says he, 'we discover some simple Christians in the valleys of the Alps, where they still exist under the name of the Vaudois, who, by the light of the New Testament, saw the extraordinary

contrast between the purity of primitive times and the vices of the gorgeous and imperial hierarchy by which they were surrounded.'

In singular consistency with their claims to be considered a surviving branch of the primitive church, they alone, of all Christian societies, have honoured in uninterrupted observance the wisdom of the early Christian churches, which proclaimed it to be a bounden duty to provide, by authority, for the elementary instruction of youth of every class. 'Not only do the rich,' said a Christian writer* of the second century, 'learn philosophy, but our poor also enjoy the advantages of instruction gratis.'

The early history of the Waldenses, after their reception of Christianity, like that of all the Alpine tribes of Italy, is wrapt in too much obscurity to enable us to state what was the exact system of education adopted by them in the dark and middle ages ; but we can discover traces of a systematic mode of conveying information to their young people at large for seven or eight centuries back. A curious Waldensian treatise, written in the year 1100, is still extant, which shows the ingenious expedients to which the Vaudois of that day had recourse for the purpose of storing the minds of their youth with useful knowledge. It is composed in a popular style, and arranged in metrical and jingling lines ; and it not only contains a brief view of the Old and New Testament history, but also of the grounds upon which the Waldenses declared themselves non-conformists with the Latin Church. This treatise is entitled 'The Noble Lesson ;' and a noble lesson it is, for it is interwoven with some admirable exhortations to piety and constancy in the faith of their forefathers, and by its familiar illustrations and poetical character it is easily committed to memory. A bundle of MSS., of the same date as this composition of the year 1100, was entrusted to the custody of the Cambridge University Library, by Sir Samuel Morland, in August 1658, after his return from the Valleys of Piemont, whither he had gone on a mission from Cromwell, under the hope of obtaining favourable conditions for the Waldenses from their sovereign, the Duke of Savoy. In this collection of old MSS. there was a Latin Grammar of the ancient *Barbes* (the Waldensian clergy were so called), a treatise on Arithmetic, and treatises 'on the Instruction of Youth,' and 'on the Ancient Discipline of Youth.' Unfortunately these precious MSS. have been removed from the library where they were deposited, nobody at Cambridge knows how or when ; and

* Tatian.

as the collection presented by Morland contained all the relics of ancient Waldensian literature which could be saved during the frightful massacre and spoliation of 1655, we have little chance of throwing any light upon the systems, which the titles of these treatises prove to have been pursued in the Valleys seven hundred and thirty years ago, and most probably at a much more remote period.

We have, however, the direct witness of their enemies as to the effects of that system; and we can produce evidence, that when the rest of the common people of Europe were in a state of the most lamentable mental darkness, the young shepherd boys and all the peasant children of the Waldenses were well instructed.

Bernard of Clairvaux, the Fenelon of the twelfth century, has left it on his pages, not with a mark of admiration, but with a sneer, that a parcel of *rustics and laymen**, who are thoroughly contemptible in all respects, had been taught to argue with their betters upon topics with which they had no business to intermeddle. Another Romish author, Reiner, whose book was written about the year 1230, vented his indignation, at an heretical community affecting to be reformers in religion and promoters of general education, in some such burst of grief as this: 'Would you believe it, they (the Waldenses) have schools every where; they have forty in one place, and they have forty-two in another. They have translated the Old and New Testament into their vulgar tongue, and so teach them to their children. Why, I myself have examined a clown who could repeat the Book of Job by heart, and I have seen others who were perfectly acquainted with the whole of the New Testament!'

In a paper of secret directions given to the Dominican Inquisitors, who were to interrogate persons accused of the Waldensian heresy, towards the end of the thirteenth century, the following extraordinary testimony appears to the efficiency of the system promoted by the Waldenses. 'You must not question them in matters of learning, or out of the Scriptures; for if you do, you will find them too much for you.' We give this upon the authority of Muratori†.

The impartial and honest Thuanus, though opposed to them in religious opinions, makes mention of the excellent instruction received by the young Waldenses of the lowest

* Another proof of connexion between the Primitive and Waldensian churches, and of the immemorial separation between the latter and that of Rome. The Romish clergy from the first have been jealous monopolizers of learning, and anxious to confine it to their own purposes; the Primitive and Waldensian clergy, instead of limiting knowledge, have found it to be to their interest to spread it.

† *Dissert. 60.*

grade in life, in a tone which does credit to his good sense and kindly feelings. ‘It is astonishing that persons, externally so rude and unrefined, should have had so much moral cultivation. You can scarcely find a boy among them, who cannot give you an intelligible account of the faith they profess.’ This was written of them about the year 1590. The same historian relates an anecdote applicable to a much earlier period,—at least a hundred years before. A young theological student, full of personal vanity and of proselyting zeal, determined to go among the Waldenses, and to convert them to the faith of the Vatican. He returned to his University, and candidly declared, that he had learnt more of religion, by listening to the answers of Vaudois children, while they were being catechized, than in all the learned disputationes he had ever heard.

With such testimonies from their adversaries, it is to be deeply lamented, that the ravages of persecution have spared none of the documents, which would have enabled us to describe the system by which a whole population of rustics and mountaineers were thus educated by the public consent, and at the public charge.

To produce salutary effects by education, the persons in whose hands education is placed, must themselves be well trained in some college, or *normal* establishment. Tradition and history speak of a college in the mountain recesses of Angrogna, where the most learned of the Waldensian barbes presided. The deep rocky glen, where the college is said to have had its location, is still pointed out by the natives of the valleys, as a place consecrated to the most hallowed recollections; but not a vestige remains of hall or grotto, which can be confidently pronounced to be the site of that venerable institution. Its destruction must be assigned to a very distant date, for it was stipulated in a treaty with Henry the Fourth of France, when that monarch took possession of Piemont, after a successful war with the Duke of Savoy in 1592,—that Henry ‘should found, erect, and maintain a college for the instruction of the youth of the Valleys.’ The Waldenses would not have made such a stipulation, had their ancient college of Angrogna been then in existence; but had one stone remained above another, they would have asked for the restoration of the old, and not for the foundation of a new institution.

The only insight (and that is merely an unsatisfactory glance) to be obtained into the method of general instruction which was prevailing among the Waldenses in the sixteenth century, is afforded by one of the MSS. of the Morland

collection, which is still preserved in the Cambridge Library. This MS. is entitled 'Historia breve degl' affari dei Valdesi delle Valli,' and dated 1587. It states, that the barbes of the valleys, besides officiating in the work of the ministry, took upon themselves the discipline and instruction of youth, especially those intended for the pastoral charge, and taught grammar, logic, moral philosophy, and divinity; and that they also devoted themselves to the study of physic and surgery, and to the mechanical arts. The same MS. adds, that in times of persecution these barbes held their meetings in secret, and preached to the people on the tops of the mountains.

A little more light breaks in upon this interesting page of history from the records of the seventeenth century. Leger, the Vaudois historian, and moderator of the Waldensian church, who was born in 1615, and was descended from a line of ancestors who had been pastors in the valleys for four hundred years, published his 'Histoire des Eglises Vaudoises,' at Leyden in 1669, after having been driven into exile by the Duke of Savoy. In this work, he has made express mention of the provision which was made for public instruction, and he speaks of it, not as something new, but as a regulation of old standing. 'All the communes are obliged to have a sufficient number of schools under proper rules, where they teach the elements of religion; but as there is very little commerce in this country, no great pains are taken to teach writing; and there are very few, even of those who can read well, and are thoroughly instructed in the scriptures, who can write more than their names. There is also one common school, maintained by the valleys in general, to which they send the more promising youth, and where they select in succession those who are intended for holy orders; these are taught philosophy, so that none are under the necessity of going to pursue their studies at any foreign college.' If we compare this statement with the Act of 1696, by which every parish in Scotland was to have *one* school, we shall find how much the Waldenses were in the advance, who had long before enacted that every commune or parish should not only have one school, but a sufficient number of schools, according to its population and locality.

But what renders all this the more extraordinary and the more praiseworthy is, that this plan of general education originated with the good sense and generous spirit of the people themselves, and not with the foresight or benevolence of the government under which they lived. Nay, it was not even with the approbation or the consent of their rulers.

On the contrary, it has often been in defiance of prohibitions, and in the midst of poverty and oppression, that the Waldenses have persisted in supplying their entire population with the means of acquiring elementary knowledge. These mountaineers have always asserted their religious freedom, although they have not been politically independent for many hundred years; and, considering how many attacks have been made upon them by the arm of despotic power, it must be a perfect enigma to those who do not ascribe their preservation to the interposition of an especial Providence, to account for the conservative principle upon which they have continued to shine, like one solitary star in a clouded sky. The Dukes of Savoy obtained the principality of Piemont in the eleventh or twelfth century, and finding the inhabitants of three valleys, which constitute the Waldensian territory, to be an intelligent, industrious, and brave community, who were in possession of the mountain passes and natural bulwarks of the country, they made compacts with them, and engaged, under the most solemn promises, and in return for their allegiance, to respect their personal and religious rights. For a time these compacts were faithfully observed, but when the attention of the Bishops of Rome was directed towards a handful of herdsmen and tillers of the ground, who disputed their spiritual jurisdiction, those jealous pontiffs contrived to sow discord between the 'Men of the Valleys' and their sovereigns, and to persuade the latter to force their recusant subjects into conformity with the Latin Church. These struggles frequently ended in compunction on the part of the Dukes of Savoy at having ill-treated the most loyal of their liegemen, and in public recognitions of their privileges. Some curious decrees of this sort are to be found in the 'Raccolta degl' Editti' of the Court of Turin. One, dated 10th January, 1561, runs thus: 'Be it known, that we have investigated the privileges, immunities, concessions, and exceptions, made and confirmed by our most illustrious and most excellent ancestors, in favour of our dearly beloved and faithful subjects, the Men of the Valleys, and that we are pleased to ratify and approve of them, and do hereby ratify and approve of them.'—Signed, 'Em. Filibert.'

Another, of the year 1585, recites some of the compacts previously made: 'A petition having been presented to us on the part of the Inhabitants of the Valleys, praying us to ratify and approve the privileges recognized by our most illustrious ancestors, especially those by Duke Louis, in 1448 and again in 1452; by Duke Amadée, in 1466; by the Duchess Violante, in 1477; by Duke Filibert, in 1499;

by Duke Charles, in 1509 ; and by Duke Filibert, in 1561 ; by this present act we confirm, seal, and approve of the same.'—Signed, 'Carlo Emmanuel.'

One of the most extraordinary of these documents is that dated 12th June, 1602, which assigns the reason why the reigning sovereign tolerated the non-conformists of the Three Valleys, sorely against his princely will, while he was determined to eradicate heresy out of the rest of his dominions.

' We having by all the means in our power, and in the service of God, contributed to the extermination of heresy for the safety of souls and for our own private satisfaction, yet have not been able to root it out of the Valleys under our dominion, because we are bound to tolerate it there,'—'dove siamo stati astretti tollerarli.'

But in violation of compacts thus repeatedly, and solemnly, and publicly recognized, the House of Savoy resolved to leave no means untried to eradicate principles which were known to be fatal to the assumption of absolute authority in church or state ; it was for this reason that the most rigorous hostility was declared against the system of education which the Waldenses pursued ; and while the churches and pastors of the Valleys were tolerated, the schools and schoolmasters were denounced from time to time with unmitigated severity.

' We forbid,' says the edict of the 25th of February, 1602, which proclaimed a continuation of 'gracious concessions' to the heretical congregations of the Valleys of Luserna, Martino, and Perosa : ' We forbid any heretic to hold any school, either private or public, in any part of our dominions whatever, under pain of death.' In 1624, and in 1632, this edict was renewed,—a pretty good proof that the schools of the Waldenses were regarded as effective and formidable engines for diffusing truth and knowledge. But notwithstanding all that was done to dry up these fountains, they continued to pour out their floods of pure water and to fertilize the land.

We have shown, with assistance of the extract from Leger, not only that every commune had as many parochial schools as were necessary for public instruction, but also that there was one common seminary of a superior description maintained, by order of Synod, at the public cost of the community. At length, however, persecution and oppression so impoverished the Waldenses, that they were obliged to accept foreign bounty for the maintenance of their schools. Cromwell, out of a collection raised in England, in 1655, directed 20*l.* a-year to be paid towards the support of the master of the principal school, and 69*l.* to be divided annually among thirteen of the parish schoolmasters. This grant was

withheld at the Restoration of Charles II. But after Queen Mary and Queen Anne had made some liberal gifts in aid of the Education Fund in the Valleys, the Walloon Churches of Holland undertook to remit a yearly contribution towards the public instruction of the Protestants of Piemont. This has been so regularly and generously continued to the present day, that, at the time we are now writing, the Waldenses have one grammar school, fifteen communal or central schools, and one hundred and twelve hamlet schools, open for the gratuitous admission of scholars. The sum applicable to education, and received from Holland, amounts to about 4000 francs a-year, or 160*l.*

Before we proceed to explain the nature of the instruction given in these schools, we will make a few observations upon the beneficial effects which have resulted from this perseverance of the Waldenses in having a well-instructed population. We might bring witnesses during a series of seven hundred years in evidence of the fact, that these educated 'boors and clowns' have uniformly been the most industrious and contented, the most religious, moral, humane, and loyal people of any nation of which history has made mention.

The 'Noble Lesson' composed in 1100, informs us, that in that age of ignorance and crime, when a man would systematically and consistently abstain from the common practices of the vicious, and refuse to join in the excesses of his companions, he was called in derision a *Waldensian*.

Bernard and Reiner, who have already been cited in testimony of the educated condition of our peasants of the Valleys, acknowledged, while they inveighed against their heretical opinions, that they were unimpeachable in their morals. 'They lie under no imputations of immorality,' said the latter; 'we have no fault to find with them, except on account of their creed, and we charge them with no other crime than that of blasphemy against the Church of Rome.' Paradin, who wrote his Annals in 1556, and brought them down to 1482, affirms, to their credit, that he had searched every history, but could find no stain attached to their character. Louis XII. of France, when he was urged to inflict some severities upon the Waldenses, swore with a tremendous oath, that he had reason to believe that they were the best people in all his dominions. And when one of the most bigoted of the Dukes of Savoy vowed that he would tolerate them no longer, his fury was appeased by a prudent minister, who asked his Highness where he would find any but the Waldenses to cultivate their sterile mountains, and to pay taxes with so much regularity. Thuanus, among other beautiful anecdotes

in proof of Waldensian virtue, relates that their Roman Catholic neighbours would frequently send their daughters to the Valleys, that their chastity might be secured ; and that throughout the whole of Piemont the well-instructed natives of the Valleys were preferred as servants and labourers, so little did their knowledge tend to make them idle or dissatisfied with their condition. The same historian assures us that no Waldensian was ever known to go to law with one of his own community before the sixteenth century, and that the first litigant was a young man who had been educated at Turin. The sufferings of the Waldenses under persecution is not the subject that we wish to introduce here, unless for the purpose of illustrating their moral character. We could produce more than a hundred edicts which have been fulminated against them, and we could tell tales of horrible cruelties inflicted upon such as refused to conform ; but we do not know of a single decree which charges them with crime, nor have we ever seen any authentic account of their having committed barbarities in retaliation.

Such, during the most turbulent periods, was the true character of a race of peasants, who were humanized by education, and such they are now—worthy successors of those primitive Christians of the second century, of whom it was said, ‘ They do not merely commit good precepts to memory, but they show forth good deeds : when struck, they strike not again ; when robbed, they have not recourse to law ; they give to those who ask, and love their neighbours as themselves.’ Well might a living traveller * report of them, after having spent several weeks in the Valleys, ‘ Of truth it may be said, that in principles, habits, and manners, they approach more nearly to the primitive professors of Christianity than any other community now existing.’

The system of elementary instruction, which has been working so well for many hundred years among the Waldenses, is now in active operation under the following provisions :—

I. Each commune or parish, of which there are fifteen in number, has what we will call its great school, situated in some central spot, to which all the children of the parish may conveniently repair in fine weather, and which is open during ten months in the year. The masters of these schools, called regents, receive stipends, which vary from 130 to 400 francs each, according to the resources of the commune ; these stipends being furnished partly by contributions from Holland, and partly by parochial assessments. They have also

* Mr. Bridge.

dwelling-houses attached to the school, which are kept in repair by the commune, and small plots of ground. The children pay nothing. The regents are required to teach reading and spelling, the elements of religion, writing, arithmetic, and *French*. French is taught because the Waldenses cannot procure any religious books in the Italian language, or in the vernacular dialect of the province. Imagine the difficulties which the poor children have to encounter. All their knowledge must be derived through the medium of a foreign tongue, but which, by the way, the pastors are wisely endeavouring to encourage as the colloquial language of the people, and ere long they will speak nothing but French. Next, the poverty of their parents cannot supply the learners with a sufficient quantity of books, slates, or paper; and the consequence is, that books are torn up and divided by leaves among the scholars; copies are written on scraps of paper; rules of arithmetic and grammar are learnt by means of recitation, and many a boy who has made some advance, must stop till his father can furnish him with materials for further progress. Add to this, that the attendance of the children is much interrupted by the necessity of employing them in the fields and mountain pasturages, and, what is worse, the Sardinian government throws every impediment in the way of education, by prohibiting mutual instruction, and any method which resembles the Madras or Lancasterian system. So lately as 1826, the king issued an order forbidding the Waldenses to have any *committees* of public instruction.

But in spite of all these hindrances, the Waldensian youth of the poorest order succeed in picking up more than a smattering of useful learning, and there are very few children of a proper age who are not in the course of education. Several communes could be named in which there is not a single child of seven years old who is uninstructed.

II. In countries like that of which we are speaking, there are many weeks in the year, when stormy weather, deep snows, and swollen torrents cut off all communication between the main village, where the great school is situated, and many of the peasants' dwellings on the mountain sides. Against this the Waldensian community has made provision. Committees of public instruction are denounced; but in the spirit of a national society for the diffusion of useful knowledge, they have anticipated all obstacles, and have taken care to have schools not only in every one of the fifteen principal villages, but almost in every hamlet. These hamlet schools are open during the winter months upon the same

principle and under the same general regulations as the central schools ; and when the children cannot reach the latter, they can attend the former. Some of the masters of these smaller schools receive less than 24 francs for their services, and none more than 50, whether their labours extend through three, four, or five months.

The population of the three valleys may amount to twenty thousand souls ; and under the supposition that there are never less than eighty-five hamlet schools open in the course of the year, and fifteen central schools, there is one school to two hundred souls. Last year 4500 children were under instruction in these institutions.

III. Until the London Vaudois Committee undertook to improve the condition of female education in the Valleys, the boys and girls mixed together indiscriminately in the central and hamlet schools ; but since the year 1824, eight girls' schools have been founded by the Committee, or by individuals, and mistresses with salaries of about three hundred francs, or twelve pounds a year each, have been appointed to conduct female education upon principles which are likely to make good servants and provident housewives, and to train them to habits of industry and neatness.

IV. The Latin or Grammar School.—This is at present entirely supported by contributions from Holland. About seven hundred francs are remitted yearly to the Valleys, for the express object of enabling a master to open a school, ‘ pour les plus beaux esprits.’ But as no further assistance is rendered to make this office effective, few are the ‘ beaux esprits’ who can leave their homes, and reside at La Torre, where the Latin schoolmaster performs his functions. The consequence is, that the attendance rarely exceeds twenty-four, and these belong principally to the adjoining villages. They come to La Torre in the morning, bring their dinners with them, and return home in the evening. The present master discharges his duties with great zeal and assiduity, and has brought his scholars forward in Latin, Greek, and geography, in a manner extremely creditable both to himself and to them. But though he would willingly receive boarders at twenty francs a month, including all expenses, he has not more than two or three in his house ; the natives of the Valleys are too poor to place their children ‘ en pension,’ even upon such moderate terms as these.

A stipend of seven hundred francs has lately been granted by the Society for the propagation of the Gospel in Foreign Parts, to enable the Waldenses to have a second grammar

school ; this bounty has been augmented by a private contribution of three hundred francs, and a school opened at Pomaretto last May, but we are not able to state any further particulars concerning it.

Such is the state of education among the Waldenses ; but the reader will at once discover a desideratum. The instruction given is only elementary, and there is no provision for a higher kind of education, or for perfecting those who are to be employed in teaching. A community, which is so determined to have a disciplined population, deserves an institution of its own, where attention may be paid to the qualifications and acquirements both of the future pastor and schoolmaster. Were a superior and pattern seminary, a college, to be established, the advantages might be incalculable not only to the Waldenses* and to Piemont, but eventually to all Italy. An English clergyman, who has the interests of the Waldenses very much at heart, and who was provided with the means of laying the foundation of some useful institution in the Valleys, made a journey to Piemont, two years ago, to see what could be done, and to sound the Vaudois upon the practicability of any scheme which he might devise. His design and proposals were to this effect : Upon condition that the Waldenses will furnish a piece of ground, and a building fit for the purpose, five thousand francs shall be given towards a general outfit, two thousand francs towards the purchase of books, together with a yearly sum of fifteen hundred francs as a professor's salary, and one thousand francs to be divided annually among ten students as exhibitions to assist them in paying for their board. He further offered to employ his good offices towards raising funds for the endowment of two other professorships, to render the institution more effective, and submitted rules to their consideration which would be likely to elevate it by degrees to the character of the ancient college of Angrogna.

These proposals were accepted, the plan was arranged as speedily as circumstances would permit, and on the 1st day of last March the institution opened at La Torre, under the name of 'L'Ecole Supérieure,' with the following regulations :

1. 'The Institution is established for the benefit of Protestant youth, who have made some progress in the grammar school of La Torre, or Pomaretto, or elsewhere.

2. 'So long as circumstances will not permit of the appointment of more than one professor, the principal will be

* The attempt to put such an establishment on foot has recently been made, and defeated by the intolerance of the Sardinian government.

required to undertake to give instruction in French, Latin, Italian, and Greek ; in history and religion, according to the confessions of faith of the Waldensian church.

3. ‘The commission, or its delegates, are charged with the examination of young persons desirous of admission to “L’Ecole Supérieure,” that it may be ascertained whether they are capable of pursuing studies requisite to qualify them for the various professions.

4. ‘The students admitted into the Institution must be capable of attending the first course of lectures, which will resemble those of the first class of the College of Lausanne.

5. ‘For ten students to be elected out of the ten Vaudois parishes most remote from La Torre, there will be exhibitions of one hundred francs each per annum. If any of the parishes which are entitled to an exhibition, should not produce a claimant qualified to receive it, the unappropriated exhibitions will be offered in succession to the parishes less distant from La Torre, according to a cycle predetermined.

6. ‘The exhibitions will be granted, after examination, to the most deserving of the candidates, from the several parishes which are to enjoy the right of nominating claimants.

7. ‘If candidates for the same exhibition should prove equal in merit, it will be awarded to the most necessitous.

8. ‘All the students and exhibitors who attend the lectures of the Institution, whether they reside with the professor or not, will be required to submit to the rules which shall be adopted for its regulation.

9. ‘The students must attend public service in church every Sunday ; besides which they must be present at a particular service within the Institution, which will be composed and appointed by the commission.

10. ‘Every student must daily attend at the hour of prayer, and must be present in class at a Scripture lecture, which will be given every day, either in the original language of the Old or New Testament, or in the French or Italian tongue, or in copies of the Lingua Valdesa.’

These rules were drawn up with the view of meeting any objections which might be raised by the Sardinian government. They were intended to be a bar to the admission of Roman Catholic students, as otherwise it might have been said that the Institution was established for purposes of proselytism. We have already mentioned that the rulers of the Waldenses have always eyed their scholastic establishments with jealousy ; and it was not until after two express treaties with England, which guaranteed the security of their personal and religious privileges to the Waldenses, that the House of Savoy issued

an edict, consenting to recognize their schools as lawful institutions. It was to this effect: 'It shall be permitted to our subjects of the said Valleys to elect from among themselves masters of schools, provided they do not receive any Catholics into their schools, but only the sons of the said Waldenses.'

Scarcely, however, did the infant establishment open, before the Intendant of the Province went to La Torre, with an order of the Minister of the Interior in his pocket, and by an act of arbitrary authority prohibited the professor from continuing his instructions, dispersed the students, and closed the school. All this happened in March last—the opening of the school and its suppression.

The short-sighted policy, the despotic veto, which has spread such consternation and disappointment among the Waldenses, is the more atrocious because it is in direct violation of one of the most solemn treaties which one country ever made with another. The King of Sardinia is pledged to the King of England, by the obligation of mutual engagements*, to respect the privileges of his Waldensian subjects; and whoever will take the trouble of going to the State Paper Office may see, not a copy, but the very treaty, with the signature and great seal of Victor Amadée attached to it, by which personal and religious liberty, and its inseparable appurtenances, are secured for ever to the Waldenses.

Nothing can be more binding or emphatic than the words of the treaty. 'Qu'elle remet et conserve eux, leurs enfans et postérité, dans la possession de tous et chacun leurs anciens droits, édits, coutumes, et priviléges, tant pour leurs habitations, négoce, et exercice de leur religion que pour toute autre chose. Et finalement les ministres de Sa Majesté Britannique, et de leurs Hautes Puissances, seront instruits et autorisés pour régler selon les anciens édits, droits, et concessions, avec les ministres de S. A. R., le détail des choses et ce que pourroit rester, et être admis pour la sécurité des dits Vaudois dans cet article, comme aussi pour l'exécution d'iceluy, tant à l'égard des choses *concernant leur religion, que leurs biens, leurs droits, et toutes autres.*'

His Majesty's government have been informed of the transaction by which this treaty has just been so shamefully violated, and it remains to be seen whether the Secretary of State for Foreign Affairs will quietly submit to such an infraction of sacred stipulations, and such an invasion of

* England guaranteed to the King of Sardinia the possession of some territory, which he still enjoys, adjoining to the Milanese, and ceded by the Emperor, on condition that the Waldenses should be unmolested.

rights, which have been made the subject of a separate article of treaty between Great Britain and the rulers of the Waldenses.

Postscript.—Since the above was written, a petition has been addressed by the Ecclesiastical Authorities of the Vaudois to their new sovereign, Charles Albert, which has been favourably received, and they have been permitted to re-establish the Institution which was suppressed by an arbitrary order under the government of the late King. But this permission has been shackled with restrictions, which it is to be hoped will be removed, when a more just view shall be taken of those treaties between the Crown of England and Sardinia, which were meant to secure to the inhabitants of the valleys of Piemont, among other privileges, the full and uninterrupted right of educating their youth in their own way, and after the best manner within their means.

The licence granted by the present King, Charles Albert, on the 27th of May, limits the number of students in the first class to fifteen; forbids the use of any books which have not first been submitted to the censorship of the Intendant of the Province; makes the nomination of the masters or professors dependent on the will of the said officer; and appoints him also visitor of the establishment.

But we will hail this royal recognition of a new institution among the Vaudois for the promotion of learning as a good omen, and we will hope for still better things at no very distant period.

THE GOTTINGEN LIBRARY.

IN the establishment and conduct of a public library intended for general use, two objects seem to be of paramount importance: first, that the collection of books should be, as far as possible, equally complete in every department; and secondly, that the access to them should be as open and liberal, and the facilities for using them as great as is consistent with their preservation from loss and damage. To attain the first of these objects, the folly of mere book-collecting must be laid aside, and the funds of the institution applied, not to the purchase of expensive rarities, nor to the numerical increase of the collection only, but to the production of a uniform completeness in every part. For the second object, a judicious arrangement of the books, convenient catalogues, and

the constant superintendence of proper librarians are principally necessary.

The University Library at Göttingen has been steadily conducted with a view to these objects for upwards of two-thirds of a century ; and it is now probably the most extensively useful institution of the kind in Europe. The nucleus of this library was originally formed by a learned Hanoverian nobleman, named Bülow ; who with great judgment, labour, and expense, had brought together a very excellent private collection of about ten thousand books, which he bequeathed at his death to the University. By the activity of Münchhausen, the first 'Curator' of the University after its foundation, the library was rapidly increased ; so that when the celebrated Heyne was first called to the University, in 1763, and appointed one of the librarians, it consisted of about sixty thousand volumes,—a number by no means contemptible at that time in comparison with the libraries of other German Universities. At the time of Heyne's death, in 1812, the number had increased to two hundred thousand, and at the present moment the library contains upwards of three hundred thousand volumes. The object constantly kept in view in forming this collection has been the provision of useful books in all languages and in all branches of literature and science ; so that it is now, perhaps, the only library in existence in which the literature of all nations and all departments of science are found supplied in equal relative completeness. Of the thousands who have visited and used the library, the great majority probably are unacquainted with its peculiar system of management, and would be surprised to learn the variety and extent of the business involved in its machinery. In the number of books, as well as in manuscripts and curiosities, it is exceeded by many other libraries ; but its distinguishing merits consist in the judicious selection of the books purchased, their excellent arrangement, and above all in the liberality of the means adopted for facilitating the use of them.

From circumstances peculiar to the situation of Göttingen, and the course of education pursued there, some parts of the system adopted at the library would be inapplicable to other places ; but many useful hints for the organization of libraries may be taken from it ; and in this country, where we have so many magnificent libraries, possessing large stores of books and ample funds for increasing them, which are far less used, and far less useful, than they might be, by reason of their incompleteness and the want of system in the management of them, and above all by reason of their *inaccessibility*,

it may be worth while to direct the attention of our readers to the means by which an institution like the Göttingen library has been brought, from very small beginnings, and with very limited funds, to a state of comparative perfection.

In the *Life of Heyne* by Professor Heeren, from which we have taken many of the facts in the following account, the machinery of the library is compared to that of the counting-house of a commercial establishment, and the comparison is fully borne out by the extent of the business and correspondence carried on, the number of books and hands employed, and the order and punctuality with which the whole is conducted. In order to follow up the system originally adopted by Heyne, namely, to render the library as generally complete as possible in every department, the progress of literature and science both at home and in foreign countries is carefully watched; in England, France, Denmark, Sweden, Italy, and Holland, agents are employed to purchase, under certain limitations and directions as to prices and subjects, all books of general utility and interest which are published in those countries; selections are made from the masses of books published at the great annual fairs of Leipzic; and catalogues of all the considerable book sales in Europe are sent to the library, and examined by the librarians, such lots being marked and priced by them as are to be purchased. Thus the library is constantly progressive, always keeping pace with the advance of knowledge in all parts of the world. The uniform *completeness* produced by this judicious and discriminating attention in the purchase of books is very remarkable. An Englishman who visits the library is astonished to meet with a more complete collection of books of English history and literature than he will readily find in his own country; whilst the Spaniard, the Frenchman, the Italian, and the Oriental scholar find their respective departments equally well filled.

It is manifest from what we have stated that the selection and purchase of books, and the correspondence required in that department, necessarily furnish a great deal of business; but another most important branch of the labours of the librarians consists in the preparation and continuation of the different catalogues, and as these appear to us to form one of the most original and valuable parts of the institution, it may be useful to describe them.

The catalogues are four in number, each being distinct from the other, but all forming parts of one whole. Every volume brought into the library is entered, in the first instance, in a rough book called the 'Manual.' In this cata-

logue the name and title of the book are entered concisely, together with a memorandum of the date of its introduction into the library, and of the place from whence it came.

In the second place, the volume is entered, with a full statement of its title, into what is called the 'Accession Catalogue.' This forms, at the end of every year, four volumes, containing, 1st, Theology; 2dly, Jurisprudence; 3dly, History; and 4thly, Miscellanea, not belonging to any of the preceding classes. Each of these volumes is subdivided, according to the form of the book to be registered in it, into folios, quartos, and octavos, the latter denomination including all smaller sizes. On one side of the title of the book in this catalogue is placed the page of the Manual in which it is to be found; and on the other side is a column for figures denoting the number of this particular book in the collection: this number thus becomes the conventional name for the book in the library, and is entered in the Manual in order to make a communication between these two catalogues.

The Manual and the Accession Catalogue thus contain a short minute of the history of each book; they are renewed annually, and their contents embrace only the transactions of a single year; they are, however, only serviceable to the librarians as auxiliaries in the internal economy of the library; the Alphabetical and Scientific Catalogues, which are permanent, are, from their fullness and accuracy, of the greatest importance to those who use the books. The Alphabetical Catalogue was commenced by Heyne in 1777, and was finished under his direction, with great labour and at considerable expense, in about ten years. In this catalogue the books are placed alphabetically according to the names of their respective authors, and the works of each author are also arranged alphabetically under his name according to the leading word of each title. Anonymous works are also arranged in alphabetical order by the principal words of their titles. The form of this catalogue is large folio, and a whole leaf is invariably appropriated to each name or title, in order that the alphabetical order may be strictly preserved, and all interlineation avoided. When one leaf is filled (which has frequently happened in the case of voluminous writers, such as Adelung, Eichhorn, Scott, and many others), it is taken out, and its place supplied by two new ones, which are inserted by the binder: upon these the contents of the full leaf are copied, and the title of the newly published work, which causes the overflowing, is introduced in its proper situation. If the volume by means of the frequency of new insertions becomes too bulky for convenient reference, it is divided into two or

more parts. An obvious advantage of this method is that the catalogue grows with the growth of the library, and may be expanded to an indefinite extent as new books are introduced. It is, therefore, always perfect in itself, and the necessity for a new catalogue can never arise. When a book is entered in the Alphabetical Catalogue, the date of its introduction into the library is placed in a column on one side of the title together with the page of the Manual in which it is found, and its class and number in the Accession Catalogue. On the other side of the title, a reference is given to the department of the Scientific Catalogue to which the book belongs. In this manner the communication between all the catalogues is established. In 1816, this catalogue consisted of nearly one hundred and fifty volumes of a large folio size,—an extent which might be supposed inconvenient and unmanageable, but in practice the scrupulous adherence to alphabetical order renders it fully as easy of reference as an encyclopædia: each volume being, of course, lettered at the back, with the first and last words of its contents.

The fourth and last process is to enter the book in the Scientific Catalogue, or catalogue of subjects. Here it is placed strictly according to its contents, and is classed without any respect to the language under the head to which it most naturally belongs. The head and the page of the Scientific Catalogue in which the book is found are then marked in the other catalogues, and also in the book itself, and it is finally placed on the shelf amongst the other books precisely in the same relative situation in which it stands in the Scientific Catalogue, with this difference only, that the folios, quartos, and octavos (under the last of which all smaller sizes are comprised), are deposited on different shelves in the same compartment. There are, however, four classes of books which are not arranged according to their contents, but according to the language in which they are written, and the age in which their authors lived. These are the Greek and Latin classics, the fathers of the church, modern poets, and romance writers, and collections of the works of authors on miscellaneous subjects belonging to more than one general head of classification; for instance, *Oeuvres de Voltaire*, *Swift's Works*, &c.

This catalogue, therefore, is a kind of map or plan of the library, and furnishes the inquirer at a single glance with every thing which it contains on the subject of his investigation. Thus if a particular author or work be inquired for, the Alphabetical Catalogue shows whether it is in the library; and if so, in what precise situation it will be found: if, on the other hand, a subject is inquired for, the librarian or

the inquirer turns to the Scientific Catalogue, and finds arranged, in exact order, all that the library contains on that subject. The advantages of arranging books according to their subjects in the catalogue and on the shelves are too obvious to require illustration ; but at a university where books on various subjects are constantly required by students and literary men, it is particularly useful to be enabled to display at one view the extent of assistance which the library is capable of affording.

It will readily be perceived that in cases where a science has been progressive, or has undergone a total reformation, as chemistry or geology, the completion of the Scientific Catalogue requires not only much thought and constant and unremitting industry on the part of the librarians, but also a thorough acquaintance with the science itself and its branches, and an accurate judgment in the analysis and classification of the voluminous materials. We believe that these labours are not performed at any other library with such skill and scrupulous attention as by the librarians at Göttingen ; and their scientific catalogue, which, in consequence of the completeness of the collection, forms almost a general index to knowledge, is certainly a singular monument of literary industry.

Every day throughout the year, not excepting the vacation that takes place between the semestral courses of the German universities, the library is open to all students and members of the University at certain specified hours, and during these hours visitors are at liberty to use the books with the greatest freedom, being restricted only from taking them down or replacing them with their own hands. In order to avoid delay in supplying the books required, several of the younger literary men, resident at the University, are employed to assist the regular librarians during these public hours—a service which is gladly rendered by them without any pecuniary compensation, as they thereby become practically acquainted with the library, and obtain the advantage of pursuing their own peculiar studies there at extra hours.

In addition to the free and gratuitous admission to the library during the public hours, all persons resident at Göttingen, whether members of the University or not, enjoy the singular privilege of using the books at home. The value of this privilege will be fully understood by those who have been compelled to pursue their literary or scientific labours with the assistance of books which can only be seen at certain hours at a public library, and have undergone all the vexation, delay, and inconvenience occasioned by the sacri-

fice of personal habits and modes and times of study. In Göttingen this great advantage is supplied to students and men of letters, with little or no danger to the books, although with a considerable increase of labour to the librarians, in the following manner. The professors of the University, and men of learning resorting to Göttingen for the purpose of using the library, or for literary purposes in general, who have made themselves known to the librarian, may receive books by depositing with the secretary a ticket, containing the title of the book required, signed by the person requiring it. Students, and persons who are not entitled to receive books in their own names, must have their tickets countersigned by a professor, who thus makes himself responsible for the safety of the books. The secretary, therefore, has upon his table a portfolio in the name of each professor; in the one part of which are contained tickets for books, which he requires for his own use, and in the other, those which are given to students and others, for whose care and due observance of the rules of the library he has made himself answerable. The tickets are distributed by the professors with the greatest liberality, no further introduction being required by the party applying for them, than such as may give reasonable satisfaction, that the books are *bonâ side* required for the purposes of study. In practice it is usual for the professor to sign in blank a number of tickets, which are afterwards filled up with dates and titles, and used by the student as occasion requires. When these are exhausted, more can readily be procured from the same professor; but to prevent confusion as much as possible, by enabling the secretary at once to see the responsibilities of each professor, no student is allowed tickets from more than one professor during the same half year. A separate ticket is required for each book; but where a work consists of several volumes, the whole may be delivered upon a single ticket. Students are not permitted to have more than six books, or sets of books, at the same time; in the case of professors and others there is no specific rule on this point, as it has been thought that with them a sense of propriety and a regard to the general usefulness of the institution would be a sufficient check to an unreasonable demand of books. As soon as a book is delivered out of the library to the bearer of one of these tickets, the number of volumes and the form of the book are marked by one of the librarians upon the ticket, and from that time the responsibility of the professor, who has signed or countersigned it, commences. The tickets of each day are in the first instance placed in a box all together; they are then

entered into the monthly catalogue of lent books, and are finally distributed by the secretary in the manner above mentioned into the several portfolios of the professors. When the book is brought back to the library, the ticket is cancelled and returned to the borrower, and the title in the monthly catalogue struck through with a pencil. Regularly every book should be returned at the end of a month; but the application of this rule is governed by circumstances, and is, in fact, frequently relaxed by the librarians upon the representation of the borrower. At the end of each academical session, however, all books, whether in the hands of professors, students, or others, must be actually re-delivered at the library, and if wanted again, new tickets must be given; the rule being inflexible, that no ticket is available after the expiration of six months from its date.

When a book is returned it is carefully examined, and if any injury has been done, it must be made good by the borrower or his surety. With respect to loss of books or damage sustained by wilful or wanton mischief, Professor Benecke, who has been a librarian at Göttingen for more than twenty years, assures us that he has invariably found that 'mistrust and reserve in lending the books have tended much more to produce mischief than liberality and confidence.'

These regulations, and the punctuality with which they are observed, render it practicable to keep a library, which is unquestionably as numerously frequented and as much used as any in the world, in such a state of good order as incalculably enhances its value. Indeed it is quite obvious that, without a scrupulous attention in all material points to the letter of the regulations, a collection of 300,000 volumes freely accessible to and much used by a perpetually changing body of about two thousand persons, would, in a very few years, be reduced to a hopeless and useless chaos.

The business of the library is conducted at present by a chief librarian, two librarians, three sub-librarians, and a secretary. The selection of books for purchase devolves exclusively upon the three officers first named: the general duties of the establishment are divided amongst all the officers. From the time when Heyne undertook the improvement, or rather the re-organization of the library, the different offices have been ably and efficiently filled; and it is worthy of remark, that the appointments are distributed amongst men of eminence in literature or learning. At the present moment, the chief librarian is Professor Reuss, author of a 'Catalogue of Treatises published in Transac-

tions of Literary Societies,' a laborious and useful work. The librarians are Benecke and Grimm, the first of whom is well known to the literary world by his editions and illustrations of several of the early German poets of the thirteenth century, and will be particularly remembered with gratitude and respect by all Englishmen who have studied at Göttingen. The name of Jacob Grimm is well known to philologists. His brother, Wilhelm Grimm, some of whose works have been translated into English, is one of the sub-librarians. These gentlemen, though generally professors or teachers in the University, are not *required* to deliver lectures, or to take any part in public instruction, the management of the affairs of the library being considered as a sufficient occupation of their time. Their presence at the library is required daily during the year, from nine o'clock in the morning till twelve. If to this is added the daily attendance during the public hours, namely, on Wednesdays and Saturdays from two till four, and on other days from one till two o'clock, it is manifest that these offices are by no means sinecures.

The annual income appropriated to the purchase of books is not altogether fixed, but it seldom exceeds 800*l.* sterling ; this sum also covers the expenses of book-binding. The salaries of the officers and the repairs of the building amount in general to upwards of 800*l.* per annum more ; we believe that we are correct in stating, that upon an average of years, the whole expenses of the library, inclusive of the enlargement and alterations of the building, which become necessary as the number of books increases, do not amount to 2000*l.* per annum. With such small means it is really surprising to find how much has already been effected by the judgment and assiduity of those who have conducted the library, and the laudable resolution with which they have kept in view the single object of *usefulness* in the application of their funds. The number of books which the library has derived from presents is by no means considerable ; we have heard, indeed, of a handsome donation made by the late King in the year 1816, and also of presents from His Royal Highness the Duke of Sussex, the Dukes of Bedford and Buckingham, the Duchess of Devonshire, and several literary societies of England ; but we have also heard a wish expressed, (which we would gladly enforce wherever our recommendation can be available,) that this liberality should be extended to works of a particular description published in this country, which are often not to be procured by any other means ; we allude particu-

larly to works on India, and Sanscrit books, which would perhaps be nowhere more used and more highly appreciated than by the constellation of oriental scholars, who at present distinguish the University of Göttingen. We give it as our honest opinion, that an author, who has published a really useful book, cannot better provide for the due appreciation of his services, or the general diffusion of his discoveries, than by presenting a copy of his work to the library at Göttingen.

By giving this account of the library at Göttingen, it is not intended to represent the system there adopted as altogether perfect, or as one which could be always applied with similar advantage to libraries in this country. Admirable as we think their plan of catalogues in many respects, we admit that it is capable of some improvements; we are aware too that in a small town like Göttingen, with a peculiar population depending upon the University, and subject to the University laws, any loss or damage from a free circulation of the books might be prevented by measures of precaution, which would be quite insufficient for that purpose in a large and mixed population; we admit, therefore, that a degree of liberality in the opportunities given for the use of the books may be safe and justifiable at Göttingen, which in London would be dangerous and ruinous. Still there is a great deal in the system we have described, which might be introduced into most of the public libraries of England with advantage. In the first place, we might profit much by adopting in our public libraries, and especially such as are attached to Universities, some principle or system in the purchase of books, by which the collections might become more complete in all departments. An intelligent German, who visited England in 1802 and 1803, says, 'It is scarcely credible that in the three United Kingdoms, there is not one public library at all complete in the most important branches of literature. From the thirty costly collections belonging to the different colleges at Oxford and Cambridge, it would be impossible to form a single library so perfect as those at Göttingen and Dresden, or several others in Germany which might be mentioned; for they consist almost exclusively of ancient classics and theology, and the notion of filling up the deficiencies of one by the abundance of the other seems never to have been entertained. Consequently in most of these college libraries you find exactly the same poverty, and the same wealth*. Can there be a doubt that in all libraries intended for general

* Goede's England, vol. iii. p. 15.

use, uniform completeness is most important ? It is not required that the libraries of the College of Surgeons, or of the Antiquarian Society should be completely provided with books on other subjects than those which are the peculiar objects of the institutions to which they are respectively attached ; but the libraries of the British Museum, of the Royal Society, and of all universities and colleges, should be as generally furnished with books in all branches of art, science, and literature, as the ends and objects of their foundation are general. Of what use is a perfect library of controversial divinity to the student of history ? or of classical learning to the mathematician ? or of natural history to the oriental scholar ? The pursuits and tastes of writers and readers are as various as their names ; and therefore, a public library should surely be so provided as to supply, as far as possible, the wants of all.

Again, in facilitating the use of the books, much more might be done in our public libraries than has yet been effected. In almost all of them, the catalogues are imperfect and inconvenient ; and the impediments which obstruct the access to the books are often vexatious. How far it would be practicable in London to adopt the practice of lending books out of the libraries may admit of some doubt ; with certain restrictions and precautions, however, we are inclined to think that it might be done in some libraries even in London ; and the magnitude of the advantage to be gained would fully justify a cautious experiment. In Universities, it should and might always be done*. We believe that the only two public libraries in this country which at present afford this great advantage to readers, are Dr. Williams's library in Redcross Street, London, and the Advocates' Library in Edinburgh ; and we are not aware of any inconvenience or injury sustained in consequence of this liberality.

In the present state of intelligence and inquiry in this country, the improvement of our public libraries would be one of the most effective modes of diffusing knowledge. Notwithstanding the size and value of many of our collections, we are far behind both France and Germany in the machinery and management of institutions of this kind, and in consequence of imperfections in this respect, some of our best libraries are unfrequented and useless. 'Books,' as Milton says†, 'are not absolutely dead things, but do contain a

* The University Libraries at Oxford and Cambridge lend out their books to members of their own body, who are of a certain standing in the University.

† *Areopagitica.*

potencie of life in them to be as active as that soul was, whose progeny they are ; nay, they do preserve, as in a viol, the purest efficacy and extraction of that living intellect that bred them. As good almost kill a man, as kill a good book : who kills a man kills a reasonable creature, God's image ; but he who destroys a good book, kills reason itself, kills the image of God, as it were, in the eye. Many a *man* lives a burden to the earth ; but a good *book* is the precious life-blood of a master spirit, embalmed and treasured up on purpose to a life beyond life. We should be wary, therefore, what persecution we raise against the living labours of public men, how we spill that seasoned life of man, preserved and stored up in books ; since we see a kind of homicide may be thus committed, sometimes a martyrdom.' Milton is here denouncing the crime of suppressing books before their publication ; but surely the strangling them at their birth is hardly more mischievous and fatal than smothering them when full-grown, or than condemning them to perpetual captivity by chaining them in dust and darkness on a shelf, and thus preventing their vital energies from being called into action. It is a melancholy reflection that thousands and tens of thousands of books are literally buried alive in some of our libraries, their 'potencie of life' extinguished by *exclusive* rules and regulations, intended perhaps by our ancestors for their preservation, but in the present state of education destructive of their usefulness. It is high time that this reproach should be removed ; and we feel pleasure in stating that increased liberality has already appeared at the British Museum and some other institutions in London : there is, however, much remaining to be done in all of them ; and in the college libraries of Oxford and Cambridge, where improvement has, except in a few cases, not yet commenced. We propose at a future time to lay before our readers a plain statement of the condition of several of our public libraries in England, selecting such as, from their situation or other circumstances, might, under good management, become the most extensively useful.

EDUCATION IN THE HIGHLANDS AND ISLANDS OF SCOTLAND.

THE elementary instruction obtained at the parish-schools throughout Scotland has long been acknowledged as the source of important benefit to that country. Established more than a century ago, among a people by nature at once enterprising and sedate, those schools have conspired with the greater opportunities of academical instruction in the same part of the island, to furnish a number of active and intelligent members of the community, who by their services in remote lands have more tended to enrich their parent-country than the natives of any other single portion of the British empire. At the same time, Scotland has presented the spectacle, most gratifying to the friends of education, of a well-taught people, whose learning, it has never yet been asserted, makes them ashamed of such honest labours as belong to the different classes in which they happen to be placed. Such have been the results even of an imperfect, but still of an extended system. But the ' Reports of the Committee of the General Assembly for increasing the means of Education and Religious Instruction in Scotland, particularly in the Highlands and Islands,' shew, that the system has latterly undergone a very complete revision, and been improved by many salutary and admirable amendments.

It will be recollected that, in 1818, a Commission was appointed by Parliament to inquire into the existing state of education throughout the United Kingdom. The chairman of this commission (the present Lord Chancellor) requested the assistance of the General Assembly of Scotland, in the hope of obtaining, by means of queries transmitted to parochial ministers, the information which the Commissioners required with respect to that part of the kingdom. The assistance of the Assembly was very readily given, and a large collection of parochial returns was soon afterwards transmitted by Dr. Baird, the venerable Principal of the University of Edinburgh, to Mr. Brougham, by whom a digest was submitted to Parliament, which was afterwards printed and published. The returns were sent back to Dr. Baird, and subsequently served the important purpose of promoting further inquiry and consequent improvement in the plan of national education in Scotland.

Furnished with the ample and authentic details comprised in these returns, from nearly eight hundred of the parochial ministers of Scotland, Dr. Baird was enabled to state, in a very convincing and effective manner, the necessity for ap-

pointing a committee to inquire into, and, if practicable, to remedy, the insufficiency of the means of education and religious instruction then existing. By his great personal exertions the whole subject was most advantageously brought under the notice of the General Assembly, to which, in fact, it was especially recommended, as involving both the temporal and spiritual interest of a considerable portion of those whom the church regarded as its own people. It was seen too, very clearly, that the efforts of the Education Societies previously existing in Scotland, four in number, were inadequate to the objects which they professed to have in view, and also incapable of extension, chiefly through want of funds; whilst the care and exertions of government, although shown in the building of fifty new churches, had not extended to the formation of additional schools. The liberal views of the General Assembly cannot but be admired. Far from shewing any little jealousy of new opportunities of instruction being afforded to the people, and still farther from considering general education as a thing in itself opposed to religious instruction, they evidently considered that, without the means of giving a general education to the lower classes, great difficulties would always be presented to imparting to them even religious instruction itself.

Upwards of a hundred years before, in 1704, the General Assembly had made an unsuccessful attempt to accomplish the formation of a committee for the very purposes which, since the appointment of the Parliamentary Commission in 1818, have been so happily carried into effect. Since the year 1725, also, acting merely as the agent of the royal bounty, the Assembly had, by a committee, applied to its destined use a sum annually allowed for the support of the missionaries and catechists in the Highlands and Islands. But it was not until seven years ago that the General Assembly took a more prominent and active part, by the appointment of a numerous committee, consisting of ministers and elders in nearly an equal proportion, with instructions to 'inquire and to report to next Assembly as to an advisable plan for the Church to adopt for increasing the means of education and of religious instruction throughout Scotland in general, where it may be needed, but particularly in the Highlands and Islands, and in large and populous cities and towns; and, after collecting and digesting the relative facts, to take what proper and prudent measures may be in their power to learn, for the information and direction of the ensuing Assembly, what degree of co-operation may be reasonably expected from heritors and others in the different districts of the country; and whether

also, and in what manner, Government may be disposed to give public aid for carrying into effect the important measure in contemplation.'

To this renewed attempt the General Assembly was encouraged by the changes effected during the lapse of a century in public opinion, and in the pursuits and resources of the nation, which now showed a much more active spirit of co-operation in all charitable undertakings: the result justified the Assembly's confidence.

A sub-committee was formed, consisting of persons already experienced in the business of the Education Societies, or officially connected with them, or with the Highland districts; an arrangement by which the Assembly at once availed itself of their information, and avoided collision with establishments previously existing. Invested with full power, and only required from time to time to report to the general committee, the individuals composing the sub-committee have pursued their extensive and most useful labours up to the present time. They directed their inquiries not only towards those places where the means of education and religious instruction were entirely wanting, but where they were inadequately supplied, or through imperfect instruments. Many details, which were not comprised in the Parliamentary returns, remained to be gathered by their endeavours, and a more general and searching inquiry was instituted by means of queries, copies of which were forwarded to every clergyman in Scotland; the answers to which queries, received in the space of two years from the time of the formation of the committee, have of course been objects of continual reference and of the utmost value.

The first report of the committee to the Assembly was founded on these answers, and represented, that in the six synods of Argyle, Glenelg, Ross, Sutherland, and Caithness, Orkney and Shetland, containing one hundred and forty-three parishes, and a population of 377,730 persons, no less than two hundred and fifty additional schools and one hundred and thirty catechists were urgently called for. It set forth, also, that the people of those districts were ardently desirous of further opportunities of general and religious instruction, wishing for the young, worldly advancement; and for the old, the consolations of the gospel; but that their poverty afforded them no means of procuring these advantages for themselves or their children. All other parts of Scotland being comparatively well provided for in these respects, it was recommended that to these districts the first attention of the Assembly should be directed. The report further

stated that the heritors in general, and many other benevolent individuals, would willingly render assistance towards accomplishing the desired improvements.

The General Assembly immediately instituted collections in aid of their great object throughout all the chapels and churches of the establishment, and opened subscriptions for the same purpose ; instructing the committee, (which was re-appointed) when the funds raised were ascertained to be sufficient, to nominate schoolmasters and catechists in the stations most urgently in want of them, after due communication with the heritors and others concerned. In all these proceedings the zeal and promptness, as well as the judgment and prudence, of the General Assembly, are equally to be admired.

Thus authorised, the sub-committee continued and even increased their labours : they entered into an extensive correspondence with Highland clergymen concerning the stations most suitable for schools in their respective parishes ; they took measures for securing proper and decent accommodation for the schoolmasters, requiring for each a school-house, a dwelling-house, containing at least two apartments, a garden, fuel, and grass for the summer and winter maintenance of a cow. It had been found, by the experience of the Society for Propagating Christian Knowledge, that these accommodations were generally granted with much willingness by the heritors, whose interest in the welfare of the schools was even increased by being thus called upon to contribute to their first establishment. It is certainly true, and may be usefully remembered by the promoters of all benevolent institutions, that there are many excellent individuals who require, in the first instance, to be solicited to contribute, but who, when they have once become benefactors, acquire a zeal in the cause which would otherwise have remained undiscovered, or even unfelt. At first they give a subscription from the shame of refusing, and they subsequently increase it from the pleasure of giving.

The appointment of teachers being a matter of great importance, the sub-committee called up from many parts of the country, and examined with much care the candidates for such an office. They also prepared a set of elementary school-books in the Gaelic language, thus removing what must have been a formidable obstacle in the outset of their plan. In frequent meetings, and with much consideration, they drew up regulations for the management of the schools, for the government of the teachers, and for their own guidance. In these useful exertions they were

cheered by the liberal donations which soon, from all parts of the country, began to flow in upon them. They were enabled to report, in 1826, that a fund had been realized, amounting to 5488*l.*, partly subscribed by individuals, but chiefly derived from parochial collections; and also, that they had selected forty stations for schools in different districts throughout the Highlands and Islands, and that they had *two* schools in actual operation. This report was received with the well deserved thanks of the General Assembly, by whom the committee was re-appointed, and instructed 'to proceed with all diligence to administer the funds, and apply them agreeably to the principles and rules they have hitherto followed, with as much economy and usefulness as possible, to promote, by the Divine blessing, what the Assembly has so much at heart—the extension of education and religious instruction in those districts of the country where they are still urgently required; and the committee was appointed to report to the next General Assembly.'

It is gratifying to pursue the labours of the committee from this point. In another year (1827), they could report that they had established *thirty-five* schools, under qualified teachers, and were provided to establish eighty-six more, in stations which they had selected; and that upwards of 2000*l.* had been added to the fund reported in the preceding year. To these results the unanimous concurrence of all the Ministers of the Church of Scotland mainly contributed. However unimposing the Scottish form of church government appears to be, that concurrence is, we observe, stated as being equivalent to the support of all the public—a very material circumstance.

The following passage in the narrative of their proceedings exhibits the view by which they were directed:—

'In the returns to the queries which the Committee had circulated in the year 1825, two sorts of exigency were submitted to their consideration, one or other of which existed in almost every Highland parish. Some districts, with an abundant population, were without a school of any description; and the bulk of the people were unable to read or write. Nor could they have induced a schoolmaster, of the necessary character and qualifications, to settle amongst them with any prospect of a tolerable remuneration. Such places claimed the first attentions of the Committee, and thither they offered to send teachers qualified to instruct in reading, writing, arithmetic, the principles of religion, and frequently in grammar, book-keeping, and mensuration. If the population was abundant in such districts, the Committee did not object that the school which they offered should be considered permanent—as permanent at least as their own supplies from which it was to be supported;

but if the population was small and thinly scattered, they directed that the teachers should officiate alternately for eighteen months or two years in succession, at two or more separate stations, according to the plan of itinerating schools, which has been practised by other Societies with so much benefit in the Highland districts. The other case was that where the common branches had been taught more generally, but where many of the people desired, and the clergyman or heritors recommended, that, among other branches, the higher ones of Latin, geography, and practical mathematics should be taught to such scholars as chose to apply for these ; and here, too, the Committee recognized the propriety of their interference. They were not deterred by any apprehension of prematurely offering the refinements of education, or of wasting the fund at their disposal, consecrated, as it was, by its charitable origin, to objects of indisputable necessity. But they considered the design of the Assembly in its whole extent ; and they remembered the generous views entertained, two centuries ago, by the legislature of this country, when, even at that less enlightened period, it enjoined the means of a classical education to be provided at every parish school. If, from that standard, parish schools had now considerably declined, was not this the result of negligence, and not of growing wisdom ? Perhaps, too, the example exhibited by the better sort of the Assembly schools might contribute, in some degree, to restore the ancient condition and character of the parochial, as well as to elevate to a new rank such other schools as might happen to be established in their neighbourhood. To teachers qualified in the higher branches, the Committee proposed a salary, exceeding only by a trifle what they offered in the other case ; and on such terms, they found no difficulty in procuring as many well qualified individuals as were required.

‘ It is believed that teachers of the latter description were not to have been procured without the mediation and careful selection of some Society: for the people at these remote situations had not the same opportunities of choosing among well educated men ; nor would they have salaried, to the same amount, any individuals that might have settled amongst them on their own adventure : if they had, the latter would still have wanted that security for the continuance of their provision which, under the usual condition of good conduct, they were likely to enjoy on the scheme of a public society.

‘ At the meeting of Assembly 1827, the Committee reported that they had accordingly called before them and examined individuals of both descriptions to the number of one hundred and twenty-two ; and that among those whom they retained with a view to appointments, the proportion of the higher to the lower class was fifteen to thirty-five,—there being nearly the same proportion betwixt the stations that required superior, and those that only sought the ordinary, branches of education.’

Athough the committee had been careful to frame rules for the guidance of the different schools, they thought it essential

that each minister in whose parish a school was situated should frequently visit it, and as it were superintend the conduct of the schoolmaster. The schoolmaster was also required to furnish a half-yearly report, specifying the number of his scholars, and their progress.

In 1829, the fourth year from the appointment of the committee, they were in a condition to report that they had nearly completed the measure entrusted to their management by the General Assembly, or at least that they had almost carried it to the extent which immediate circumstances rendered advisable. At the date of that report they had founded eighty-five schools, and their attention was now rather directed towards the means of maintaining these in successful operation than to increasing their number, although a small additional number of schools (six) was then contemplated and in progress.

The judicious attempt made in the outset of their proceedings to interest the heritors in the plan had proved abundantly successful, as by them, in almost every instance, the school accommodations were voluntarily furnished,—a fact honourable to all parties, to the heritors themselves, and to the Committee of the Assembly, in whom it showed that the heritors placed entire confidence.

From the report of 1829 it appears that there had been in attendance at the different schools, in the half-year preceding, no fewer than 6486 scholars, of whom 2512 were learning to read Gaelic; 5491 were learning English; 3057 were getting instruction in writing and arithmetic; 63 in book-keeping; 114 learning Latin; 57 geography; and 76 practical mathematics and mensuration. As it is highly probable that nearly all the six thousand and odd scholars, thus introduced to some branch or other of knowledge calculated to make them more intelligent and more useful, would have been left, but for the establishment of these schools, in the original ignorance to which poverty and the remoteness of their habitations from opportunities of learning had consigned them, the General Assembly, and especially its committee, has, indeed, good reason to look back upon its labours with satisfaction. But not contented with the precautions already alluded to for securing the efficiency of the several schools, the committee appears frequently to have deliberated concerning some plan of making their superintendence more particular, and to have contemplated the appointment of an especial visitor for the whole establishment. The Convener relieved them from the difficulties with which this scheme was beset, by undertaking to per-

form a tour of inspection himself. In company with the secretary of the committee, Mr. Gordon, he employed two months in doing this service previous to the report of 1829, travelling, in the course of it, more than two thousand miles, through the shires of Perth, Inverness, Moray, Ross, Sutherland, and Caithness, the islands of Orkney and Shetland, and some of the Western Islands. This service was again performed in the ensuing year. The English reader may form some idea of the importance of it by a mere inspection of the map; but those who have travelled through some of the districts named, will be still better enabled to appreciate the value of exertions by which the light of knowledge, resembling in its effects the vivifying light of the sun itself, is gradually diffused over desert places, and through retired and humble hamlets, and lonely cottages without number, carrying with it, beyond all question, an increase of happiness wherever it finds entrance.

The results of the personal inquiry made during this philanthropic tour were, on the whole, very satisfactory, and such an intimate knowledge was obtained of the necessities of the different districts, as must have proved very useful to the committee at head-quarters. Among other facts of a gratifying nature, it was ascertained that the teachers sent by the committee were held in much estimation, and looked upon as so many instructive models for the imitation of inferior masters. It is thus with all efforts made with sincere intentions and a requisite degree of prudence; the actual or immediate power of the instruments employed is necessarily limited, but the effects of their exertions, being wrought under a superior guidance, always exceed the first expectations of those who begin the work of benevolence.

In the latest report in our possession, that for May 1830, we observe, with pleasure, every sign of a uniform and steady progress. The number of schools had not, in the year following the preceding report, been much increased, the committee declaring that, though 'they know, and have been taught to confide in public beneficence, they will not abuse it by extravagant expectations, or even by attempting to stimulate it to exertions beyond the usual tenor of its habits.' They remark, however, very justly, and there are many persons eminent for zeal in the cause of charity upon whom it is to be hoped the remark may not be thrown away, that 'the sphere of Christian enterprise is not alone among the remoter regions of the earth: there are concerns sometimes of more real magnitude, because admitting of an easier and closer agency, which demand the attention of the church at

home.' They add, and are fully justified in adding, that ' it is with no vain pleasure that they may contemplate seven thousand young persons taken up, through the public bounty, and instructed in various branches of useful knowledge, who had been otherwise, in a great measure, abandoned to idleness, and ignorance, and vice.' Although the committee have never forced or commanded the study of any branch of knowledge not elementary, they refer to a table showing the different branches which are actually taught, (the higher being only taught when requested,) as proving the desire for a great variety of useful instruction really existing in the Highlands and Islands. By this table it appears that of about 7000 scholars, 2616 were learning Gaelic; 5669 English; 2972 writing; 1912 arithmetic; 80 book-keeping; 159 geography; 41 mathematics; and 121 Latin.

The committee had, at the time of their making this report, extended their valuable care to the institution of auxiliary Sabbath evening schools. Of upwards of three thousand persons of different ages attending these evening schools on their only day of rest, it is interesting to know that nearly eight hundred are adults, not otherwise enjoying the benefits of school instruction. It is almost unnecessary to observe that a very great degree of attention is paid both in these and in the daily schools to *religious* instruction. The scriptures, we observe, are read daily as a school-book, a practice to which we believe many devout persons entertain strong objections: the other regulations under this head are such as might be expected from a church eminent for its piety.

In the selection of books for the use of the schools, it would almost, at first sight, appear that there was a disproportionate number of religious works: for nothing is more certain, than that a distaste for serious reading has often grown out of the compulsory perusal of the most excellent productions. The inculcation of piety is probably best effected by occasional, and sometimes by unexpected efforts; and of all reading, perhaps none conduces less to the moral improvement of humble readers than books of controversial theology, in which the vanity of the creature too often excludes from the view all idea of the excellence of the Creator. With a few exceptions, the religious works in the school catalogue are not open to this objection, and their number is partly explained by their being intended only for adult readers, whose opportunities of religious instruction, which the Assembly considers it a duty of primary importance to increase, are reported as being very scanty. Many excellent moral works, several [entertaining books] of travels, some historical and

geographical works, some well-selected poems, and a few books of a scientific character, are also included in the libraries. Gaelic being taught in the schools before English, a considerable portion of the books are in that language, and competent judges pronounce them to be pure, idiomatic, simple, and correct; the language being such as the genuine Highlander is said to be accustomed to hear and to derive pleasure from. The works are also such as, being suitable to the tastes and feelings of the Highlanders, seem to be well calculated to excite in them a love of reading and a desire for more information. Among the Gaelic books we observe there are translations of Bunyan's Pilgrim's Progress, Blair's Sermons, Ossian, the Dairyman's Daughter, and several tracts and religious discourses. All the school-books are presented in the cheapest possible form, the whole set which the scholar requires, from the time of commencing with the alphabet to the end of his elementary instruction, only costing three shillings and sixpence,—a sum which, small as it is, is often more than the parents of the poor children can afford, so that many are unfortunately even kept from school on this account. The school libraries are of great value to the different districts. Each library consists of nearly sixty volumes in English and Gaelic; the books of one station differ from those of the neighbouring stations, and at the expiration of two years a mutual exchange is made of the books of one station for those of another. Thus, in the course of six years, each school will have had the advantage of possessing about one hundred and eighty volumes. This, with reference to the wild district in which the arrangement exists, is literary wealth. There are, indeed, we suspect, many individuals whose education has been conducted in country schools in England, in whom the comparison even of these advantages with their own condition as school-boys, will renew often-felt regrets at the remembrance of the difficulty with which, even at the commencement of the present century, books could be procured to gratify the thirst for reading, which is one of the chief pleasures of intelligent boys.

The value of these libraries is exceedingly increased by their being made easily accessible to the families of the school-children. Few people in the upper ranks, or even in the middle ranks of life, know much of what passes in the interior of cottages, and from this ignorance many well meant schemes for the improvement of the poor prove abortive: but those who know the habits of the common people, must also know that the worst part of their condition does not so much consist in the coarseness of their food, clothing, and lodging, things to

which custom has made them indifferent, as in the listlessness of all hours not necessarily or commonly given to labour. It is to relieve this that the common people fly for amusement to many unprofitable ways of spending time and money, and often sink into sloth and sottishness. The young and active, and those who have had some education, feel this want of employment the most. To them a book is a gift of value, and a library an inexhaustible source of happiness. In the promotion of education it should never be forgotten how very essential it is that good books should be provided for those to whom the blessing of education itself is imparted. It is yet, however, much to be regretted, that in an age characterized as much by the extraordinary number of books daily issuing from the press as by any other circumstance, so very few should yet have been written adapted to the understanding of the labouring poor of agricultural districts, and of course of those in which the Highland schools are established. Some appear to be written to show the learning of the writers, and some to show their condescension. Some are too dictatorial, and some too childish. In some, vulgarity and meanness are mistaken for clearness and plainness; and from others the well meant zeal of religious persons has deterred readers by the everlasting repetition of serious exhortations, by which few are improved, and many are offended. Nay, there are some very excellent persons who look upon moral observations, if unaccompanied by an enforcement of the tenets of some particular church, as absolutely dangerous reading, just as if morality and religion were in their very nature diametrically opposed to one another. We believe the General Assembly, judging from the reports of their committee, understand better both the people whom they wish to instruct and the true interest of religion; and although the collection of books in their list might admit of improvement, we cannot doubt the vast utility of sending them forth into those remote parts of the island where, when the committee began its labours, scarcely any books, save a few school-books, were to be found. Above a century since the General Assembly distinguished itself by planting about eighty libraries in the Highlands; but of these hardly a vestige, it seems, is now to be found. The renewal of such wise endowments has been hailed by the Highlanders, who are an intellectual, vigorous, and ambitious people, with the liveliest gratitude.

In looking over the different reports of the schools, there are some statements which, simple in themselves, and unaccompanied with comment, are yet calculated, in no small

degree, to interest every benevolent reader. The contemplation of a desire for improvement struggling under all the disadvantages of poverty is in itself affecting. The report of the deputation concerning the school of Arinagour, in the island of Coll, states, that 'the people of this island are very poor, and have not much intercourse with the inhabitants of the neighbouring islands. No teacher could have had any inducement to settle amongst them on his own adventure ; but when the Assembly school was opened, scholars came to it from all parts of the island, many from a distance of five miles every day. The grown up people showed the deepest interest in the instruction of their children. Mothers with infants in their arms were present at the examination, and looked with eagerness on the progress of their children at school ; and when the examination was concluded, these females, anticipating their husbands, and assuming to themselves the task of speaking in behalf of their whole community, expressed in their own language their eloquent acknowledgments of the blessing which the school had brought amongst them.'

It would be injustice towards a laborious, self-denying, and often ill-requited class of men, namely the village school-masters, not to add what follows :—

‘The teacher has generously extended his instructions to the whole people in the place, without seeking any remuneration ; for indeed, they have none to give. Last winter, the heads of families assembled every evening in his dwelling-house, and were taught by him to read. These meetings were generally attended by nineteen out of the twenty-four heads of families residing in the village.’

There are many actions which commonly pass for brilliant, which seem to be inferior in real merit to this devotion of time on the part of a man whose days are passed in the wearisome task of teaching children, and who yet undertakes to give instruction at the close of it to those whom to teach must be still greater labour ; apparently, from a mere love of doing his duty, thus relinquishing almost all the little leisure which his humble but most useful station affords.

The schoolmaster of Fort Augustus writes (in 1828-29),

‘The falling off of this school is, in a great measure, owing to the poverty of the people, who, though the fees are now reduced to one half their former rate, cannot afford to pay them.’

Still more affecting is the statement of the master of the school at Glenbenchar, Kingussie :—

‘The very richest here, if there are any more so than others, are

so far from being able to pay fees, that it is no uncommon thing for their children to shun school, because their parents cannot purchase the necessary school-books; and the parents, in this situation, offer me part of their subsistence in barter for the book, though that subsistence is often far too scanty for themselves. They will offer me a daily part of their small, and in winter their rare, pittance of milk and potatoes, which are their only food—sometimes dearly imported by them from a distance. Though equally necessitous myself, I cannot always be prevailed on to accept of these contributions.'

This simple detail requires no remark; it contains an appeal which ought to be all powerful to those whose imaginations are filled with the prospect of rescuing distant regions from barbarism, and who are too prone to forget the privations and the ignorance of many parts of their own country. Since the publication of the 'Tour to the Hebrides,' most people have felt, or affected to feel, some interest in the character and pursuits of the inhabitants of the western islands of Scotland—islands presenting many features of wild grandeur, and washed by a stormy ocean, but exhibiting much kindness and hospitality to strangers whom curiosity leads to overcome the difficulties in the way of visiting them. But this feeling has been too much like that long cherished sentiment of romantic attachment to Highland scenery and manners, often not very well founded, and producing no particular advantage to the country which the tourist delighted to describe, or the poet to celebrate. As regards the islands themselves, the want of even the common means of education was most severely felt until within a recent period: in places furnishing as many as one hundred and fifty scholars to one of the Assembly's schools, there was not any possibility, before the establishment of those schools, of inducing a teacher to settle, because there was no way of paying him. The adult population had grown up unable even to read the Bible. Since the establishment of these schools the poorest child has been taught to read, and a great proportion of the adults have most willingly offered themselves candidates for what education could be imparted to them.

By a table at the end of the report for May, 1830, giving an account of upwards of 6500 scholars, we see that 782 are not in attendance at the week-day school. Out of the whole number, nearly 6000 learn English; nearly 3000 are taught to write; 1900 are instructed in arithmetic; 159 in geography; 80 are advanced into book-keeping; and 121 are taught Latin. Many minor circumstances, not devoid of interest, are noticed in the different tables or schemes of the establishment (Report, 1829). Of one school, that of Spin-

ningdale in the parish of Creech, containing seventy-five scholars, thirty-one of whom are girls, (the prejudice against female education, which existed very strongly in the Highlands, being fast disappearing,) it is observed, 'attendance very irregular, owing to poverty of the people.' Of the school at Muirtown, parish of Knockbane, it is said, 'part of the fees are paid in value of produce ;' yet in that school there are one hundred and forty scholars. There are fifty-seven scholars at the school at Dalnabraise, parish of Rogart, and 'fifty-seven adults attend a Sabbath evening school along with the scholars.' Of the school of Kenmundy, parish of Deer, attended by one hundred and thirty-eight scholars, we read, 'salary here only 12*l.* 10*s.*'

The General Assembly must, we think, derive gratification from one circumstance, of which there are occasional notices in the Reports, namely, that the children of Roman Catholic parents are in many instances sent to their schools. Out of eighty-three scholars at the school of Glenlivat, a place once only remarkable for the making of whiskey, twenty-six are of the Roman Catholic persuasion. Of thirty scholars at Dalibrog, in the parish of S. Uist, 'all are Roman Catholics except five.' These are not solitary instances. The Report of 1829 states, that

'The schools are always open to scholars of this class as freely, and on the same terms, as to the Protestant, and the teachers have been directed not to press on the Catholic children any instruction to which their parents or their priest may object, as interfering with the principles of their own religion. The Catholic children resort, accordingly, to the Assembly Schools, in most cases without jealousy or reluctance, and receive every branch of literary instruction in the same classes with the Protestants, from the same school-books, and without any sort of distinction betwixt the two denominations. At the same time, the Committee have specially directed, that the religious instruction given at the Assembly Schools, whatever may be the number of Catholics usually in attendance, shall be always accommodated, strictly and exclusively, to the principles of the Established Church : and the Catholic children are invited to participate, so far as their advisers may think proper to direct them.'

In a letter from a minister in the small island of Benbecula, in which upwards of two hundred and fifty scholars are attending the different schools, it is stated that the Catholic priest lends the most efficient aid in advancing the interests of education, giving every possible countenance 'and support to the different schools.' The advancement of learning owes too much to our Catholic ancestors to justify the opinion, perhaps too generally entertained, that the Roman church is

hostile to the interests of education; but it is still most pleasing to observe the decline of those jealousies which have too much prevented the union of Protestants and Catholics in the promotion of a great national good. After surveying this great national work, for such it is, we derive much satisfaction from finding that adequate funds have been supplied, in addition to parochial collections, by the contributions of individuals and of religious and benevolent societies, for the expense of the whole of so large an establishment of schools as that created by the Assembly. The disbursements in the year ending May, 1830, were about 2200*l.*, and the receipts 2300*l.* Of this sum 890*l.* was received by parochial collections; 240*l.* from different societies; 970*l.* in donations from individuals; and the annual subscriptions amounted to nearly 200*l.* The private donations constitute, it will be seen, a considerable item in these receipts; they include '100*l.* from a clergyman of the Episcopalian church, well known to the world by his improvements in education,' affording another pleasing proof of forgetfulness of sectarian divisions in a general cause; and also '200*l.* from Scotsmen residing in Charlestown, South Carolina, denizens of the United States, but desiring to offer this mark of remembrance to their native country, whose institutions for education they still regard with gratitude and pride.'

Conformably to the spirit which pervades the whole of the Assembly's Reports, we remark that nothing is more apparent than the liberal regard entertained and expressed in them, for all societies and institutions professing similar objects. The leading desire seems to be to cultivate the understanding of the poor and ignorant, and by that means, including religious instruction, to make them happier and better. Far from viewing with dislike the exertions of distinct associations in the same field, and in the same localities, they have seemed careful to encourage their efforts, and most careful not to interfere or come into collision with them. For each association, of which the real object is the promotion of education in the Highlands and Islands, there is, they observe, a sphere of action peculiar to itself.

'A populous district, for example, may be supplied either with a school of the ordinary kind, or with one that shall offer more desirable opportunities to the clever and ambitious; and each of these might be superintended by separate societies. There are many stations, again, at which the population is not quite so numerous as to call for the establishment of a school with all the apparatus of accommodations,—such places might be advantageously visited, if no larger field invites them, by the teachers on that plan of occasional

or ambulatory schools, which has been so usefully employed in the Highlands and Islands by the Gaelic School Society. Another way of benefiting these districts is by the employment of catechists. In short, for every variety of locality at which education is required in the Highlands and Islands, there are corresponding varieties in the mode of operation which, if necessary, might be observed by the several educational boards; but in reality no jostling or mutual impediment has ever taken place.'

Such are the views and feelings with which all great and good works should be undertaken, and if there is, as we believe, a just hope that in education will be found a cure for most of the moral and political evils that afflict communities and individuals, no greater or better work can occupy the attention of the benevolent and the wise, than that of its diffusion wherever it has not yet been carried.

THE CAMBRIDGE SYSTEM OF EDUCATION.

We shall endeavour to give, as briefly as possible, an account of the system of education which obtains in the University of Cambridge. We may hereafter be tempted to make some observations of a more detailed and critical nature on some parts of this system; but these our readers will be better able to appreciate when we have given an account of the arrangements and institutions which at present exist in the University.

The course pursued at the University of which we speak may be most conveniently described by considering it as composed of two elements: the College system, that is, the instruction presented, the superintendence exercised, and the motives offered by the separate Colleges with reference to their respective students; and the University system, that is, the examinations for honours, or *for passing*, which the University in its aggregate capacity directs; the lectures of its Professors, with their conditions of voluntary or compulsory attendance; and the prizes and rewards which are open to the competition of the students of any College.

The University system is that in which Cambridge most nearly resembles the universities of other countries, and consists, as in other academic bodies, principally of the lectures of professors, and of the examinations to which the students are subjected; together with the regulations belonging to these means of instruction. Every student, without exception,

has to undergo two University examinations, one in his second year, and one in his fourth. The subjects of these examinations are, principally, some of the Greek and Latin classics, some portion of the historical parts of the Greek Testament, Paley's *Evidences* and *Moral Philosophy*, and the elementary portions of mathematics. No one obtains the degree of Bachelor of Arts till he has passed these examinations in a manner satisfactory to the examiners. The latter of the two examinations includes a competition for the most distinguished honours which the University can bestow, both for mathematical and classical eminence ; and the names of *all* the persons who pass it are arranged in the order of merit.

Besides this course of *general* education, there are additional requisitions also belonging to the University system for degrees in the separate faculties. Candidates for the degree of Bachelor of Medicine are required to produce a certificate of their diligent attendance on a complete course of the lectures on the principles of pathology and the practice of physic, given by the Regius Professor of Physic. By a recent regulation, they are also obliged to attend a course of lectures of the Professors of Anatomy, Chemistry, and Botany, these Professors being at the same time required to make their courses of such an extent as may adapt them to the purposes of the medical student. The student also undergoes an examination (upon paper, like all the Cambridge examinations) by each of these four Professors, and has to produce a testimonial of having, on these occasions, acquitted himself satisfactorily.

Besides these requisitions, the medical student has to perform certain 'exercises' in the schools, that is, to read theses and to maintain disputations on certain professional subjects. This mode of offering to the University evidence of the fitness of the candidate for academical degrees, was, in former times, the leading and almost the sole condition of obtaining those distinctions ; and this was the case in all the Universities of Europe, and on all branches of knowledge. The most prominent directions of the statutes of the University of Cambridge are for the assiduous private practice and public exhibition of the technicalities of such disputations among the students. In medicine, the retention of the custom thus legally enjoined, seems to be by no means without its uses. In 'arts,' that is, in mathematics and morals, it has gradually become almost disregarded in effect, though still retained as a matter of form under the direction of the statutes. This change, however, has only taken place in very recent times ; and those who recollect the interest

which attended the struggles of 'Sophs' in the 'Arts Schools,' a quarter of a century ago, are wont to speak and think with regret of the departed glories of these theatres of ancient subtlety. It will probably, however, appear, to a dispassionate view, that little purpose could now be answered by syllogistic conflicts on points of modern mathematics; and that the silent change which has converted this ceremony into an occasion for a *vivâ voce* examination, with a view to a previous arrangement of the competitors for honours, is a desirable and judicious improvement.

The degree of Bachelor of Civil Law is conferred on similar conditions to that of Bachelor of Medicine. The candidate has to pass 'the previous examination,' that is, the former of the two general University examinations, of which we have spoken; to attend the lectures of the Professor of Law for the space of one year; and to be examined by the Professor. He has also to keep 'exercises' in the law schools, similar to those of the medical student in his department.

No degrees in Divinity are conferred upon *young* men; the lowest, that of Bachelor of Divinity, requiring the person to be a Bachelor of Arts of ten years standing. Nor is there, for the undergraduate students, any peculiar course of theological study insisted on by the *University*. But the gospels and the Evidences form, as we have said, part of the University course for all; besides which, each College has its own regulations on this subject. The Norrisian Professor of Divinity delivers a course of lectures on doctrinal and historical theology; and a certificate of attendance on this course is demanded by the Bishops, in most cases, as a condition of ordination.

There are no *compulsory* examinations in any other subjects than those we have mentioned; the competitors for the Hebrew scholarships and prizes, as well as for various other University honours, being voluntary. But there are courses of lectures delivered by University Professors on most provinces of science. We have already mentioned those on physiology and medicine, anatomy, botany, chemistry: some of these are attended by many general students from choice, as well as by professional students. In addition to these, we may mention mineralogy and political economy; and, more particularly, geology, natural and experimental philosophy, arts and manufactures, and modern history. The persons who at present lecture on the latter subjects are, Professors Sedgwick, Airy, Farish, and Smyth. These names are well known to the world: their lectures are delivered with care and zeal, and their auditors are numerous.

We may here also notice the courses of lectures of Professor Scholefield on Greek, generally delivered to a crowded audience; and those of Professor Lee on Hebrew and Arabic.

There are several teachers of modern languages in Cambridge, and some of them able men; but their formal connexion with the University is too slight to bring them particularly under our notice here.

It will be seen from what has been said, that the University system has undergone various modifications of late years. The establishment of the *previous examination* (that to which students are subjected in their second year) took place in 1822. The *classical tripos* (an honorary classification of those who, on taking the Bachelor's degree, distinguish themselves in classical studies) was also instituted in 1822. The introduction of classical subjects into the examination of those who are candidates for degrees dates only from the same year. Various modifications have been made in the examination for mathematical honours, especially some important ones in 1827, which are understood to have answered in practice, and are likely to be pursued still further, a *syndicate*, or committee, being at present in existence for that purpose. The University cannot reasonably be accused of having shown any extraordinary repugnance to change, nor any disposition to be too lax in its requisitions from the students. Many, indeed, have complained that there is too little of fixity in its system, and that a more rigid tenacity of existing rules would be more wise and proper; but the recent improvements have, on the whole, been made too gradually to lead to any serious inconvenience. Others have thought that the amount of the compulsory examinations is such as to leave too little time for voluntary studies. It certainly is a curious fact, illustrative of this tendency, that on the beginning of the operation of the previous examination in 1823, the audiences in the public lecture-rooms, for instance, in those of chemistry and modern history, immediately fell off very considerably.

What has hitherto been said refers to that portion of the institutions at Cambridge which we have called the University system, and which resembles that of most other universities, except that perhaps examinations occupy in it a larger share than they do elsewhere. But the other portion, the College system, ought by no means to be overlooked. It is at least equally influential with that which we have described; and we believe most of those who have studied its operation believe it to be the most beneficial part of a Cambridge education. The College course consists of lectures and examinations,

which are principally confined to classical and mathematical subjects. It is generally believed in the University, apparently with reason, that instruction on such subjects could be given only very superficially and imperfectly by the professorial system. A lecturer on the differential calculus, or on Thucydides, could do little in the way of carrying along with him an audience consisting of the whole or any large portion of one thousand two hundred undergraduates. The business of instruction is probably better conducted by the College system, where a tutor or lecturer has a class of twenty or thirty pupils, whom he can address collectively, and can also examine individually, so as to ascertain the degree of their attention and the nature of their difficulties. The personal acquaintance subsisting between teachers and learners so circumstanced, and likewise connected in various other ways, is held by the admirers of the English College system to be a great advantage. There is established under this arrangement a superintendence, capable of being used either to stimulate or to warn, which probably most of those interested in a youthful student would rather wish to have strengthened than weakened. At any rate this relation of the pupil to his College tutor is one of the most important and characteristic features in the education given at Cambridge.

The College lectures on the subjects of classics and mathematics will, of course, answer the purpose of assisting the student in preparing for the University examinations, since these latter turn on subjects of the same kind. But the more direct purpose of College lectures is to inform and direct the pupils with respect to certain other and additional examinations—the *College* examinations. These now take place in every College, we believe, generally at the end of the academical year. This universal prevalence of College examinations is another of the improvements of recent times: and as each examination in each College fills from ten to thirty sheets with printed questions, the University press is absolutely clogged with these documents at the period when the annual examinations in the Colleges take place; and a collection of them would form, every year, a considerable folio volume.

It may, perhaps, here occur to the reader, that there is a considerable waste of labour on the part of the persons who construct these question-papers, since the same questions might be used for the whole University. We do not think, however, that this view will, on a closer inquiry, appear well founded. There must, at any rate, be *many* fit examiners, in order to conduct the examinations usefully: and the fitness of an examiner consists in his being well informed on the

topics to which his questions refer. When he is so prepared, the construction of his questions costs little labour ; the labour of examining the answers is considerable, but cannot be evaded, and can only be lightened by diffusing it over a large body. The *Fellows* are generally the examiners in their respective Colleges, and this is one of the most important functions of persons holding such stations. In electing fellows, in most, we believe in all the Colleges, reference is had to their fitness for the discharge of this office. In many cases a certain degree of eminence in the mathematical or classical *tripos* is insisted upon as an indispensable requisite in the candidate for a fellowship. And, in general, a superiority in these respects is considered in the light of a recommendation, except when the fellows are elected by a special examination held for the purpose, which is the case in the larger Colleges.

The annual College examinations differ from the University examinations in having for their subject certain selected works of ancient authors, and certain particular branches of mathematics for students of each particular standing. In his reading of the portions of ancient literature thus fixed upon, the student is directed to make himself master of the principal points of criticism, history, and antiquities which bear upon them, with the illustration which they may receive from other ancient authors, and various similar topics. We conceive there is much that is well calculated for the salutary discipline of the intellectual faculties of a young man, in this task of collecting from various quarters all that can throw light on a given limited field. In this employment he is assisted by his tutor or lecturer, who, generally with no small industry and zeal, communicates in his lectures the results of his own reading as applied to the author thus placed before him. English scholars are often accused of confining themselves too much to mere verbal criticism, and of neglecting those philosophical views of language, of taste, and of history which give to the study of ancient authors its highest value and greatest attraction. Perhaps all that can justly be demanded from teachers is, that they should transmit to their pupils the department of knowledge which they profess, in the best form in which it can be found among the common stores of literature. We trust, however, that a higher ambition, which has already shown itself among the scholars of Cambridge, that of appropriating all that is soundest and best in the widest speculations and deepest researches of the learned men of other countries, may be considered as likely to operate in future more widely and energetically than it has yet done.

The results of the annual College examinations, of which

we have spoken, are notified by an arrangement of the competitors into various classes, which are publicly exhibited in the particular college. The desire of honour and the fear of shame thus excited are motives very efficacious in calling out the talents and the exertions of students; and the preparation for these College examinations, alternately with the requisitions and incitements of the University system which we have described, are amply sufficient to occupy the powers of a large portion of the undergraduates in continued and instructive employment. For those who have activity and talents there are additional opportunities of exertion; for instance, declamation, essay, and verse prizes, and scholarships in College; and other competitions for similar objects open to the whole University, and consequently conferring much greater distinction on the successful candidate. The competitors for these honours are generally very numerous; and from the variety and frequent occurrence of these competitions, it may, and often does happen, that a person who brings to the University talents, scholarship, and emulation, spends his time in a perpetual succession of examinations and struggles. Many, no doubt, as may be imagined, are untouched by these incitements; but they do not escape the necessity of satisfying both the College and the University examiners.

Perhaps the most peculiar of the institutions of Cambridge is that of Fellowships. Those who are elected fellows of a College become possessed of a small stipend, of very various value in different instances; and in most Colleges they succeed in the order of their seniority to the choice of certain livings, as they become vacant. We have already said, that some of the resident fellows of each College execute the office of College examiners, and that they are generally chosen with a view to their fitness for this and similar offices. This, at least, is the case at present, in every, or almost every election at Cambridge; and every one, knowing any thing of the place in recent times, will be able to confirm this statement. The rule is followed so far, that it perpetually happens that the electors in the smaller colleges (the master or the fellows) adopt a more meritorious person from another College, passing over members of their own, who are judged less fit. This is more especially usual when they wish to obtain, as their new fellow, a person likely to fill with propriety the place of tutor, or assistant-tutor; for though it is not necessary that the tutor should be a fellow (there being instances to the contrary, and even cases where the assistant-tutor is a married man), it is undoubtedly a convenience to all parties that

the tutor should be a member 'on the foundation' of the society.

This practice of going beyond the limits of the College to procure a better tutor than can be found among the existing fellows, is extremely common. Sometimes the tutors so chosen are only Bachelors of Arts. The business of private tutor, one of considerable importance, is perhaps followed by Bachelors in greater number than by those of a higher degree. By the custom of private tuition the pupil receives the instruction and advice of his tutor, alone, during a certain time, generally an hour every day: the reputation of the tutor for scholarship, or for mathematical knowledge, is the circumstance which principally attracts pupils to him; and one who has eminently distinguished himself is always much sought.

In the case of many of the fellowships in several of the Colleges, the will of the person who endowed these situations has limited the choice with certain conditions; as for instance, that the holders shall come from certain counties, from certain schools, &c. These restrictions do not generally exclude deserving men, because prospects of this kind are taken into account in the selection of a College; and a person who intends to be a candidate for a fellowship, looks out at first for a College in which there is an opening for him. The limitations are, however, in most cases productive of more inconvenience than good; and a strong disposition has appeared in the Colleges themselves to get rid of these fetters, as far as the law will allow them to do so. In St. John's, formerly much restricted, the fellowships are now thrown open to such an extent, that there is, in effect, scarcely any restriction or appropriation felt. This improvement was introduced by letters-patent from George IV., at the desire of the College. In those fellowships which have been founded by private persons, scruples are, very naturally, entertained as to the propriety of violating the directions of the founder.

The fellowships are of great use in supplying both the University and the Colleges with officers of various denominations requisite for the management of their affairs or their discipline, with tutors, public and private, with examiners, and also with a sort of academic public, which connects and mediates between the officers and the undergraduates. College Fellowships also have often afforded, and afford at present, the means of retirement and study to many persons who prefer such occupations to the struggles of professional or public life. It would hardly be too much to say, that these situations supply the only encouragement which this

country now offers to the cultivation of learning and mathematical science. A youth of narrow fortune, who has a strong bias to these studies, looks to a College-fellowship as the goal of his desires, and the means of cultivating his favourite pursuits ; and if his desires are limited to this object, he rarely fails. If these institutions did not exist, such a person would have no resource but to turn in despair to the counter or the desk, leaving literature to those who can make it popular and gainful, and science to those who can make it useful for the ordinary purposes of life.

We have thus given a very brief sketch of 'the Cambridge System,' so far as its institutions are concerned ; and if we have occasion again to resume the subject, we shall venture to suppose, that our readers have collected some notion of the various elements of which it consists, though these are generally found to be so numerous and so complicated as much to perplex inquiring foreigners, and to puzzle even Englishmen, who have not attempted to arrange in their minds any knowledge on those subjects which they may have acquired through relatives or acquaintances. This is not very surprising, when we consider that we have the pupil placed under various relations to his College tutor, often also to a private tutor, to College examiners, to University examiners, and, if he have any love of knowledge, generally to University professors ; that there are employed, as means of instruction and regulation, not only lectures, examinations, and honours, but the superintendence of his tutors ; and that besides this, certain matters of conduct and regularity are attended to by persons who are often, collectively speaking, called 'discipline officers ;' namely, the deans in the College and the proctors in the University : when we consider, moreover, that the reward of the student may consist in his acquiring an interest in certain corporate property ; that he thus may be led to the new employments and obligations which belong to a person 'on the foundation ;' and that, connected with this institution, we have the phenomena of the common tables, the collected monastic dwellings, the college libraries and chapels, the academic groves and walks, the gowned and capped population, alike of pupils and of teachers, as well as the public library, the senate house, the lecture rooms, garden and museums, which elsewhere constitute all that a University presents to the eye of a traveller.

NEW ENGLAND FREE-SCHOOLS.

THE subject of providing education for the whole community has already been discussed in this journal ; and as the importance of the question can no longer be overlooked, we think it desirable to appeal to experience to aid us in forming a judgment. We, therefore, now refer to the only instance, where, as far as we know, the experiment has been fully and fairly tried—to the Free-school system in the New England States of North America*.

Universal elementary education in Free-schools established by law, has been known in that part of the United States nearly two centuries. Of course, by this time, it may be reasonably supposed, that materials must exist there, from which we may form an opinion as to the value and efficacy of the system itself. If it has failed in that free government, it may well fail almost anywhere ; if it has succeeded there, we may, perhaps, gather from the experiment, materials for promoting its success in other countries. But, we must first understand something of the circumstances under which it has arisen, and attained its present extent and character in New England itself.

The New England States are now six in number ; Massachusetts being the chief of them ; and constitute the northern and eastern portion of the United States of North America. They lie under a climate, where a severe winter prevails one half of the year ; and this circumstance is, probably, favourable to the education of the labouring classes, since the inclement season, which suspends so many of their occupations, gives them at least the leisure needful for intellectual culture. But, on the other hand, the population, though it has increased and is increasing with enormous rapidity, is still a scattered population ; and this circumstance is unfavourable to the progress of popular education, which, like all other moral ameliorations and benefits, is much dependent on the social principle, and is propagated and maintained with ease only in well-peopled neighbourhoods and communities. The New England States, whose capital is Boston, a city of about sixty thousand inhabitants, comprise a territory of more than sixty-six thousand English square miles, and constitute about one fourteenth part of the soil of the whole republic of the United States. Their population in 1830 was more than one million and nine hundred thousand, or about thirty souls on an average to each English square mile ; but if it were as

* We are indebted for this valuable communication to Professor Ticknor of Boston, Massachusetts, who states, ‘that the facts here advanced are all unquestionable, and that the colouring is below the truth.’

dense as population is in France, there would be nine millions on the same soil ; and if as dense as it is in England, there would be about twelve millions. Taking then all these circumstances together, especially the large amount of the population, and the length of time it has been subjected to the effects of universal education, the experiment has probably been a fair one, and is likely to afford important results either one way or the other.

The history of this population, so far as our present purpose is concerned, is short. It goes back to the year 1620, when the first settlement of that part of America was begun at Plymouth. The people are almost entirely of English descent, and in their language and characteristics more homogeneous than the population of England itself ; since they have hardly any varieties of dialect or personal qualities by which the inhabitants of the different states can be distinguished. For a long time they were nearly all Puritans, who in the reigns of James I. and Charles I., left their native country to enjoy unmolested the rights of conscience. Many of those who thus emigrated were men of property. Many of them had received the best English training and education*. All of them were high-minded men, full of moral daring, and a stern courage ; eager to sacrifice everything to what they esteemed the true faith, and the genuine practice of Christianity. Their church government, their civil polity founded on it, all their institutions, indeed, were essentially popular from the first, and have remained so ever since.

Among the popular tendencies in these earliest settlers, none was more marked or original in its character, than the tendency to make *education universal*, an idea which, so far as we know, had then been neither acted upon nor entertained elsewhere. The first hint of this system—the great principle of which is, that the property of *all* shall be taxed by the *majority* for the education of *all*—is to be found in the records of the city of Boston for the year 1635, when, at a public or body meeting, a schoolmaster was appointed ‘for the teaching and nurturing children among us,’ and a portion of the public lands given him for his support. This, it should be remembered, was done within five years after the first peopling of that little peninsula, and before the humblest wants of its inhabitants were supplied ; while their very subsistence from year to year was uncertain ; and when no man

* It is made apparent by Mr. Savage, the accurate and learned editor of Winthrop's Journal, that in 1638, there were in New England, in proportion to its population at that time, as many graduates from the two English Universities, as there were in England proper.—Vol. ii. p. 265, note.

in the colony slept in his bed without apprehension from the savages, who not only everywhere pressed on their borders, but still dwelt in the midst of them.

This was soon imitated in other villages and hamlets springing up in the wilderness. Winthrop, the earliest governor of the colony, and the great patron of Free-schools, says in his journal under date of 1645, that divers Free-schools were erected in that year in other towns, and that in Boston it was determined to allow for ever 50*l.* a year to the master with a house, and 30*l.* to an usher. But thus far only the individual towns had acted. In 1647, however, the colonial Assembly of Massachusetts made *provision by law*, that every town in which there were fifty families should keep a free-school, in which reading and writing could be taught; and every town where there were one hundred families should keep a school, where youth could be prepared in Latin, Greek, and mathematics, for the College or University, which in 1638 had been established by the same authority at Cambridge. In 1656 and 1672, the colonies of Connecticut and New Haven enacted similar laws; and from this time, the system spread with the extending population of that part of America, until it became one of its settled and prominent characteristics, and has so continued to the present day.

This system of universal education has now therefore become, to a remarkable degree, the basis of the popular character, which marks the two millions of people in New England. The laws, indeed, differ in the six states, and have been altered in each from time to time since their first enactment; but all the states have laws on the subject; the leading principles are the same in all of them; and the modes of applying them, and the results obtained, are not materially different. Indeed, in almost every part of these six states, whatever may be the injunctions of the law, the popular demand for education is so much greater, that the legal requisitions are generally or constantly exceeded. The most striking instance of this is, perhaps, to be found in the city of Boston, where the requisitions of the law could be fulfilled by an expenditure of three thousand dollars annually, but where from sixty to seventy thousand are every year applied to the purpose. And yet multitudes of the poor and small towns in the interior show no less zeal on the subject, and in proportion to their means make no less exertion.

The mode in which this system of popular education is carried into effect is perfectly simple, and is one principal cause of its practical efficiency. The New England States

are all divided into small territorial communities called *towns*, which have corporate privileges and duties, and whose affairs are managed by a sort of committee annually chosen by the inhabitants, called *select men*. These towns are of unequal size; but in the agricultural portions of the country, which contain four-fifths of the people, they are generally five or six miles square, and upon them, in their corporate capacity, rests the duty of making provision for the support of free-schools. This duty is fulfilled by them in the first place, by voting at a meeting of all the taxable male inhabitants over twenty-one years old, a tax on property of all kinds to support schools for the current year, always as large as the law requires, and often larger; or if this is neglected by any town, it is so surely complained of to the grand jury by those dissatisfied inhabitants, who want education for their children, that instances of such neglect are almost unknown. The next thing is to spend wisely and effectually the money thus raised. In all but the smallest towns, one school at least is kept through the whole year, in which Latin, Greek, the lower branches of mathematics, and whatever goes to constitute a common English education in reading, writing, geography, history, &c. are taught under the immediate superintendence of the *select men*, or of a special committee appointed for the purpose. This, however, would not be carrying education near enough to the doors of the people in agricultural districts to enable them fully to avail themselves of it, especially the poorer classes and the younger children. To meet this difficulty, all the towns are divided into districts, varying in number in each town from four to twelve, or even more, according to its necessities and convenience. Each district has its district school committee, and receives a part of the tax imposed for education; sometimes in proportion to the population of the district, but oftener to the number of children to be educated. The committee of the district determine where the school shall be kept, select its teacher, choose the books that shall be used, or delegate that power to the instructor, and in short are responsible in all particulars for the faithful fulfilment of the trust committed to them; the general system being, that a school is kept in each district during the long winter months when the children of the farmers are unoccupied, by a male teacher capable of instructing in reading, writing, arithmetic, English grammar, geography and history; while in the same school-house, during the summer months, schools are kept by women to instruct the smaller children in knowledge even more elementary. In this way, for the population of New

England consisting of two millions of souls, not less than from ten to twelve thousand free-schools are open every year; or on an average, one school to every two hundred souls; a proportion undoubtedly quite sufficient, and larger than would be necessary, if the population were not in many parts very much dispersed.

The beneficial effects of this system are such as might be expected, and are in general sufficiently obvious. The security of life and property is greater in New England than it is anywhere else in the world, by far the larger part of the inhabitants sleeping constantly with doors neither barred nor bolted. The intelligence of the people is greater, on an average, than anywhere else; not one in a thousand of those born and educated in New England being unable to read and write. The pauperism in the native population is almost nothing. Indeed the industry, order, wealth, and happiness, which so generally prevail there, which have so greatly increased during the last half century, and which are still so rapidly increasing, rest, under Providence, for their basis, mainly on the elementary education given to all in the free-schools.

But besides these obvious and wide effects of the system of universal education, there are others, which have been incidental and unexpected, and which can, perhaps, be fully understood only in connexion with the circumstances that produced them, and the principles on which they depend. One of the most remarkable of these is the readiness with which the inhabitants of each town vote and raise the money necessary to support their schools. The reason is, that it is raised by a tax on property, and therefore operates as a benefit to the majority of those who vote for it. In most towns of New England, one-fifth of the inhabitants pay, at least, one-half of the tax; and probably do not send more than one-sixth of the scholars. Of course, the school-tax is, to a considerable extent, a tax on the richer classes to educate the children of the poorer; and yet, as all pay in proportion to their means, the poorest man feels that he has done all he ought to do to purchase the benefit which he receives, and he therefore claims it, like the protection of the state, as a right, instead of receiving it as a favour. And this is as it should be. Every man in the community has an interest, that ignorance, vice and barbarism be kept out of it, and a claim on the commonwealth that they should be. In New England, if he be poor, he has the promise of the law, that his child shall be educated, and thus preserved from the greatest temptations to degradation and crime; if he be rich,

he is promised by the same law, that he shall live in a community, where universal education shall keep the foundations of society safe, and afford him a personal security greater than that offered by the terrors of prisons and tribunals of justice. The system of free-schools in New England, therefore, is to be regarded, and is there regarded, as a great moral police wisely supported by a tax on property, to preserve a decent, orderly, and respectable population ; to teach men, from their earliest childhood, their duties and rights, and by giving the mass of the community a higher sense of character, a more general intelligence, and a wider circumspection, to make them understand better the value of justice, order, and moral worth, and more anxious and vigilant to support them.

On this point no one has spoken with so much power as Mr. Webster, now the first statesman in New England, and probably in the United States, who, alluding in public debate to their free-schools, where he himself received his earliest training, said :

'In this particular, New England may be allowed to claim, I think, a merit of a peculiar character. She early adopted and has constantly maintained the principle, that it is the undoubted right, and the bounden duty of government, to provide for the instruction of all youth. That which is elsewhere left to chance, or to charity, we secure by law. For the purpose of public instruction, we hold every man subject to taxation in proportion to his property, and we look not to the question, whether he himself have, or have not, children to be benefited by the education for which he pays. We regard it as a wise and liberal system of police, by which property, and life, and the peace of society are secured. We seek to prevent, in some measure, the extension of the penal code, by inspiring a salutary and conservative principle of virtue and of knowledge in an early age. We hope to excite a feeling of respectability, and a sense of character, by enlarging the capacity, and increasing the sphere of intellectual enjoyment. By general instruction, we seek, as far as possible, to purify the whole moral atmosphere ; to keep good sentiments uppermost, and to turn the strong current of feeling and opinion, as well as the censures of the law, and the denunciations of religion, against immorality and crime. We hope for a security, beyond the law, and above the law, in the prevalence of enlightened and well-principled moral sentiment. We hope to continue and prolong the time, when, in the villages and farm-houses of New England, there may be undisturbed sleep within unbarred doors. And knowing that our government rests directly on the public will, that we may preserve it, we endeavour to give a safe and proper direction to that public will. We do not, indeed, expect all men to be philosophers or statesmen ; but we confidently trust, and our expectation of the duration of our system of government rests on that trust, that by the diffusion of general knowledge and good and virtuous sen-

timents, the political fabric may be secure, as well against open violence and overthrow, as against the slow but sure undermining of licentiousness.'—*Journal of Debates in the Convention to revise the Constitution of Massachusetts*, 1821, p. 245.

Another benefit, which was not foreseen when free-schools were first introduced, and which, like the last, both facilitates their extension and ensures their permanence and efficacy, is the great interest they excite, and the consequences that follow it. By the mode in which they are managed, the whole population is led to take an interest in them; and each individual, as it were, is called on to assist in carrying forward some one school in the way best suited to the wants of his family and neighbourhood, as well as to the universal demand. The people, in their town meetings, vote the money for the schools; the people, by their district committees, spend the money they have raised; and the people, by their own children, get the benefit of the money. It is, indeed, the people's affair from beginning to end; the *whole* people's affair: and as it is one that comes home every day to their notice, supervision, and wants in the daily education of their children in the very schools where they were themselves taught, it is sure to be understood, and equally sure not to suffer materially from neglect. The committees will not fail to get as good teachers as the money entrusted to them will procure, that their judgment may not be disparaged among the little body of their constituents; they will have the schools as numerous as they can afford, that none of the children may be kept from them by distance; and the people themselves, feeling they have thus paid for the instruction, are sure to claim the benefit of their own sacrifices by sending their children to get it. Popular education has thus long been the most important subject that occupies and agitates the little villages and neighbourhoods of New England; and this stir, this interest, this excitement about it, constitute a more watchful superintendence, and produce a more sagacious adaptation of the means to the end, than could result from any apparatus devised for the purpose by the government, or any other interference of the constituted authorities of the state. One of the most important effects then of the New England system of free-schools is, that it has developed this strong popular interest, and made it an effectual agent in popular education.

Another indirect, but more obvious benefit arising from this system is, that it gives an upward tendency to the whole population. It gives the first means of intellectual culture to all, and, with the use of these means, there comes inevitably, in more ingenuous minds, the desire to rise. It is

true, the state does little more than give this first impulse and opportunity ; but the people, sometimes with, and sometimes without the assistance of the state, create everywhere the rest for themselves. New England, besides eleven *colleges*, which are chartered institutions offering the best education America yet affords, possesses not less than one hundred and fifty chartered *academies* ; a sort of gymnasia between the free-schools and the colleges, often founded or assisted in their foundation by the state, from which few young men of promise are excluded, and where they receive, certainly not a thorough classical or scientific training, but still one that fits them to be efficient, practical men in the concerns of the world. In this way many are led onward step by step, almost without being aware of it, from the free-schools, through the academies, the colleges and the studies of a profession, until at last they find themselves suddenly standing, they hardly know how, on the very threshold of life, and entering the most important places in society. The benefits arising from this effect of the free-schools of New England are undoubtedly more wide and important than could have been anticipated, and are every day increasing. Many persons in that country are now distinguished in the learned professions, and in the management of the state, who, but for the means offered them in the free-schools of their native villages, would never have emerged from the humble condition in which they were born.

The last benefit of this system, which is becoming every day more and more perceptible, is that it is certainly the safest, and perhaps the only safe foundation on which to trust the popular institutions of the country. In a government where the people hold *practically* the sovereign power, and where they meet repeatedly every year in their small communities to exercise that power in matters of moment ; where the most important offices in the state are filled *annually* by *universal* suffrage, and where the very elements and action of the constitution are, from time to time, submitted to the same test, it is plain there can be no ultimate security for liberty or property, so deep or so effectual, as a universal education, which shall cultivate the moral sense of the whole people, and, by instructing them in their own rights, make them wise enough to respect the rights of others. Such an education is to be supported by law, on the same principle on which the administration of justice is supported by it ; and can be defended at least as successfully as church establishments for the religious instruction of the people. But it goes deeper and broader than either of them. It lays the foundation not only for the religious instruction of the

whole people, but for their instruction in all their rights and duties as men and citizens.

On the whole, therefore, the experiment of subjecting the property of all to taxation for the purpose of giving the first elements of education to all, which has now been going on in New England for nearly two centuries, must be considered as having been fairly tried and eminently successful. Success, too, has had its natural effect, and has produced, and is producing, imitation. The other states of the American republic, though education has always been greatly encouraged and widely spread among them, have of late shown renewed anxiety in relation to it; and many have already begun by legislation to attempt to place it on the same ground on which it has so long stood in New England. Indeed the idea seems more and more to prevail throughout the whole republic, that all popular institutions of government can only rest safely on some similar system of education, protected by law and founded on property.

But the introduction of such a system, whether into those parts of the United States where it does not yet exist, or into other countries where it is entirely unknown, must, in order to produce all its good effects, be gradual, as must any change intended to reach and affect the character of a whole people. For such a change cannot be brought about by the enactment of a statute, or the providing a fund. It can be brought about only by gradually interesting the whole population in it; by making each town, each village, each neighbourhood assist in it, contribute to it, and superintend and watch it, as a private interest of their own, which they will not trust out of their own hands. They must feel too, that it is not a charity, or a favour granted to them by others, or sent down from their ancestors, but a right purchased and paid for by themselves, to which they have as clear a claim, as they have to the protection of the laws or the offices of religion. This is, of course, the work of time, of habit, and of experience. The statute book can no more do it, than it can compel a man to manage his own business skilfully, or regulate his household with discretion. It is, therefore, only where popular education has been the anxious care of the people, until it has become to them as a personal interest or a domestic want, that we can expect from it the wide practical results in the character and condition of a country, which it is undoubtedly, at last, able to produce.

REVIEWS.

Beschreibung der Stadt Rom von Ernst Platner, Carl Bunsen, Eduard Gerhard, und Wilhelm Röstell. With Contributions by B. G. Niebuhr, and a Geognostic Essay by F. Hoffmann. Illustrated by Plans, Elevations, and Views, by the Architects Knapp and Stier, and accompanied by a separate Collection of original Documents and Inscriptions, by E. Gerhard and Emiliano Sarti. Vol. i. 8vo.

THE volume before us forms the introductory part of a work which, whether we consider the nature of the subject, or the distinguished names associated in the undertaking, and the time and labour that have been dedicated to it, claims the attention of all who take an interest in ancient literature and history. A worthy description of Rome, though it may be most attractive to those who have visited the Eternal City, and who would revive and recollect the images it once called up in their minds, or to those who hope to enjoy that happiness, and who wish their steps to be guided and their eyes armed for a discerning contemplation of that marvellous scene, is not less valuable for those whose conceptions of the subject must be formed entirely from secondary sources. The origin and history of this important work are related by the editor, Mr. Bunsen, in a preface which also contains a critical notice of the literature appertaining to Roman topography, including every production of any note in this field, from the time when it first began to be cultivated in the middle ages to the present day, with a general outline of the proposed nature, plan, and arrangement of this book. It grew, like its vast theme, out of a very diminutive beginning. Its original design extended no further than to a remodelling of Volkmann's German compilation from Lalande's *Voyage en Italie*. The publisher Cotta, during his stay at Rome in the winter of 1817, engaged Mr. Platner, whose studies had long been directed to the history and arts of Italy, to undertake this task, commencing with that volume of Volkmann's work which contained the description of Rome. Niebuhr, who was then Prussian envoy at the Papal court, promised his assistance in superintending the antiquarian part, and the present editor, who was then secretary to the legation, offered a contribution to illustrate the Christian monuments of Rome.

Before long, however, it became evident that the basis which had been chosen for the work was too slight and narrow, and that it would be impossible, without inconvenience, to adhere even to the arrangement of the original. Its defects were rendered more glaring by the contrast between its execution and some essays furnished by Niebuhr, which contributed mainly to determine the scale and character of the new plan. As with the enlargement of its dimensions every part acquired greater separate importance, a more complete division of the labour became desirable ; and Platner resigned the head of Pagan antiquities, together with the general duties of editor, to Bunsen, in order to devote himself entirely to his favourite pursuit, the investigation of Rome's Christian antiquities, and the description of its modern works of art.

In the spring of 1823 Niebuhr left Rome, and was succeeded in his diplomatic station by the editor, to whom however he had previously communicated the results of his inquiries into several of the most difficult and important questions of Roman topography, so that this work will represent his views on the most obscure and interesting points of that subject. In announcing a fact which so greatly enhances the value of the book, Mr. Bunsen acknowledges his general obligations to his friend, in language which does no less honour to his feelings, than to the lamented person who is the subject of it. He declares that, 'whatever there may be in his antiquarian researches deserving the approbation of intelligent judges, and useful in promoting the knowledge of Roman antiquity, may be ascribed more justly to the guide of his philological and historical studies ; to the friend who, with paternal kindness, had opened to him the inexhaustible stores of his learning, than to himself. For, he adds, if it is not always founded on materials which he has communicated, still it has certainly been suggested by his hints, or directed by his master-eye which nothing escapes, or corrected by his all-comprehensive knowledge.' We may add, that though the names of the other contributors are not all equally familiar to the English public, they are men of high, some of the highest reputation in their respective departments, and that, if they had not been before known, the specimens contained in this volume would sufficiently prove the ability of the authors to carry on the work in a manner worthy of the great auspices under which it has been begun.

The editor concludes his critical review of the labours of his predecessors by observing that the literature belonging to the description of Rome, if it were to be collected in a Thesaurus, would fill not less than seventy folio volumes, and

that nevertheless the reader who should have the courage to explore this huge mass, would not find in it a complete description or enumeration of the antique buildings, nor an historical and critical examination of all the churches, nor even a complete catalogue of the Vatican Museum. The modern additions that from time to time are made to this formidable pile, commonly aim at exhibiting the subject in a more popularly attractive form than it presents in the elder authors, who did not affect to disguise or set off their erudition by any adventitious ornaments. Hence the learning, which, in the old books, if dry, was concentrated and condensed, is diluted in the new to suit different or more delicate tastes ; and while the bulk of the topographical literature is enormously expanded, the ends of instruction and amusement are both very imperfectly answered. A work was still wanting, which, in a comparatively narrow compass, should embrace a more comprehensive outline and more complete details, than are to be found in any that has yet appeared on the subject : and this is the void which the authors of the present description have endeavoured to supply. Their task, involving the two opposite processes of enlargement and compression, demanded undoubtedly no ordinary degree of industry and judgment ; but what we see before us inspires us with great confidence in their success, and we believe, if the room that in other similar cases might be saved from minute and frivolous erudition on the one hand, and from declamation on the other, were carefully and judiciously husbanded, many ponderous collections might be reduced to an equally portable size, not only without any loss, but with a considerable increase in their real value.

The work consists of two parts, one general and preliminary, which is contained in the present volume : in the other part, a separate book will be devoted to each of the topographical masses into which the city will be divided for the purpose of description, so as to enable the reader, as he proceeds, most easily to combine its features in one comprehensive view. The physical character of each district, and the history of its occupation and its fortunes, will be described in an introduction prefixed to each book. The whole will be illustrated by two large maps : one of these will be reduced from Nolli's great map of the modern city, accompanied by one, on the same sheet, of the country round in a circle of three miles diameter, and by a smaller geological map founded on Brocchi's, but enriched with a section of the Roman strata by Hoffmann. To this will be added three small maps, representing the city in the reign of Ser. Tullius, the walls of

Aurelian and the regions of Augustus, and the modern *Rioni*. The second large map will be on a new and peculiarly interesting plan. It will exhibit an accurate view of the natural inequalities of the ground: in this outline will be inserted Bufalini's plan made in 1551, according to Nolli's reduction; and the modern streets, represented by fainter lines, will afford the means of comparing the city as it now appears, with Rome as it stood in the sixteenth century, before the sweeping changes made by Sixtus V., Paul V., and other popes. All the ruins of ancient Rome still preserved, as well as those marked by Bufalini, which have disappeared since his time, and the course of the walls of Servius, will be shown in this map, and the ruins now no longer visible will be distinguished by peculiar marks, and referred to their exact position; a work of great labour, undertaken by the architect Stier, which will be of incalculable use in determining the points where excavations may hereafter be made with a reasonable prospect of important discoveries, and at all events without any material waste of time and labour.

The whole work will not exceed five volumes, but the last will be accompanied by a separate collection of documents relating to Roman topography, consisting partly of the treatises of the *Regionarii* and other authors, who have described the state of the city in the middle ages as eye-witnesses, and partly of passages extracted from ancient and modern writers, and of inscriptions, proving particular topographical facts. A critical introduction by Sarti will communicate some important discoveries on the sources of the early topography. Another small volume, distinct from the main work, but forming a natural and interesting appendix to it, will contain an anthology of Roman inscriptions.

We must now turn to the first part, the plan of which is explained in a preliminary article by the editor. It consists of four books. The first is the physical introduction, designed to give a general view of the principal facts connected with the distribution and the nature of the Roman soil, and with the quality of the air. This very important and interesting branch of the subject had been almost entirely neglected in all preceding descriptions of Rome; and indeed it has been only since the beginning of the present century, that Roman geology has received the attention which its remarkable phenomena so well deserve, both on their own account, and on account of their connexion with the early history of the city. The second book, containing the historical introduction, is devoted to the review of the principal vicissitudes through which the city has passed from its foundation to the return of

Pius VII. ; to the examination of its condition at the most important epochs in this period, and to a critical inquiry into the sources from which our knowledge of its history is derived. The third book introduces the reader to the history of the arts, so far as it is connected with the monuments and works which are subjects of the description. This comprehends only one period in the history of ancient art, and that not the most interesting ; but of Christian art Rome may be regarded as the cradle and chief theatre, as the place where its first efforts and its most brilliant triumphs, and the signs of its languor and decay, all meet the eye together : and hence an outline intended to prepare a stranger to appreciate and enjoy the various classes of its productions, must include every stage of its rising and sinking fortunes. The fourth book, the introduction to the topography, describes the origin and successive enlargement of the fortifications of the city.

It will be evident from this sketch of its plan, that the present volume embraces a great number of highly interesting subjects. It would be impossible, without far exceeding the necessary limits of this review, to afford to all of them space sufficient even for a brief notice of the most important investigations belonging to each head. In selecting those to which we must confine ourselves, we shall be guided not so much by their intrinsic value, as by their connexion with the general design of our journal.

We may presume that most of our readers are familiar with the site of Rome ; yet as the same object may be viewed in various lights, it may not be useless for our present purpose to observe, that in its course through the city, a tract of a little more than two miles in length, the Tiber makes three great bends of nearly equal compass. It first approaches Mount Pincio, receding from the hills on its right bank, the Mounts Mario and Vaticano, which together make a semi-circular sweep, inclosing with the elbow of the river the Vatican Field, a level about a mile long terminated toward the south by the northern foot of the Janiculus. The bay contained between the second bend of the river and the hills on the left, which at the same time make a slight turn in the opposite direction, is the Field of Mars, the site of the chief part of the modern city. It is bounded to the south by the approach of the river toward the foot of the Capitol. The long straight ridge of the Janiculus, running from north to south, forms the chord of the third arc, which incloses the district of Trastevere. This tract is connected by a narrow strip with the Vatican Field, and ends toward the south, where the Janiculus again meets the river. Of the seven hills on

the left bank, four, the Capitoline, Palatine, Aventine, and Cœlius, are insulated heights; but the other three, the Quirinal, Viminal, and Esquiline, are promontories that jut out toward the Tiber from one long range, and are only separated from each other by narrow gorges running up into it. This common range, which in many points ends very abruptly on the side of the river, sinks, by an extremely gentle slope, into the plain which stretches from it to the foot of the Apennines.

The geognostical features of the memorable district just described, are the subject of an interesting chapter by Professor Hoffmann of Berlin, who has collected the most important observations of Breislak, Leopold von Buch and Brocchi on the nature of the Roman soil, and has added a general view of the geological conclusions that result from them. The most instructive details are due to the labours of the industrious and intelligent Brocchi, whose delightful work, *Dello stato fisico del suolo di Roma*, is the best guide for one who wishes to investigate the subject. Our object here will of course be only, within the space we can spare, to communicate what may be generally intelligible and interesting to our readers. The facts brought under review belong to three classes: proofs of inundation, marine and fluviatile, and of volcanic agency. The first in order of time are the traces of the sea that once covered the site of Rome. These are most conspicuous in the structure of the hills on the right side of the river; in Monte Mario, the summit of which is covered with sea shells; in the sandstone and marl of the Vatican (the material of the Roman potteries), which abounds, more especially the marl, in marine, animal, and vegetable remains. In the ground opened some years back for the foundations of a new saloon in the Museum Pio Clementino, a bone was discovered which Brogniart held to be the metatarsus of a paleotherium. The Janiculus, which is, in fact, a continuation of the same ridge with the Vatican and Monte Mario, interrupted only by some little glens, exhibits similar formations. A fountain of oil is said to have burst out from the side of this hill in the eighth century of the city; and Brocchi thinks it probable that a stream of petroleum may have issued from the marl, as it is the same soil which still gives rise to bituminous springs in the territory of Modena and of Parma.

The effects of volcanic action are most prominent on the opposite side of the river, among the seven hills and in the adjacent plain at the southern extremity of the city. These hills are mainly formed of huge masses of tufa, in which

Brocchi distinguishes two species, both manifestly of igneous origin, but differing in their composition and texture:—
1. *tufa litoide*, a hard stone, probably the *lapis quadratus*, used by the Romans for paving, and the material of the *Cloaca Maxima*, and of the inner part of the substructions of the *Tabularium*; it constitutes the bulk of the Capitoline hill;—2. *tufa granulare*, a light and very friable substance, so called from the coarse ill-compacted grains of which it is composed, together with other fragments, including small lumps of dark grey lava. It is unfit for architectural purposes, but is used near Velletri for bricks, and appears to have been employed in ancient times for sepulchral urns, as it still is for other vessels. This tufa, which has arisen from the disintegration of the porous pumicelike lava, called by the Italians *lapillo*, is more widely diffused than the lithoidal tufa, and forms the main mass of the Pincio, the Quirinal, the Viminal, and the Palatine. But the most important fact regarding its position is, that, on the heights to the right of the river, it is found overlying the above described marine formation; on the summit of the Vatican, in a bed six feet thick, containing among others small fragments of peperino and basalt, and surmounted by a layer of very light pumice-stones, as big as walnuts, which have been traced to a considerable distance. The same tufa appears on the top of the Janiculus, with large pieces of pumice imbedded in it; and the same strata extend to the summit of Monte Mario. On the left side of the river, the only instance of a similar superposition was discovered by Brocchi under the Tarpeian rock, where the lithoidal tufa at the summit covers a bed of granular tufa, which, in its turn, rests on a mass of sand and clay. This last Brocchi conceives to be a marine formation; and from observations made on the wells in this part of the city, he concludes that the real basis of the seven hills is a continuation of the marine formation on the right bank of the Tiber. Finally, fresh water deposits, abounding in organic remains, occur high above the present level of the river; on the Esquiline at the height of one hundred and forty feet, resting on a bed of tufa. The most important and interesting of these deposits, as well on account of its character as of its architectural uses, is the travertino. It is particularly conspicuous on the hills of the left bank: on the Aventine, at a height of ninety feet above the surface of the river, it forms a horizontal bed, which may be traced to a distance of half a mile without interruption. Here it is seen resting on alluvial sand, which itself covers the volcanic tufa of the same hill. A still more remarkable phenomenon occurs on the Pincio, and in the

tract between that hill and the Ponte Molle, where the tufa is found incumbent on vertical beds of travertino, and likewise containing fragments of that stone, as is also the case on the Janiculus.

The facts we have thus briefly noticed suggest the following general conclusions. The marine deposits first described, the hills on the right bank of the Tiber, the oldest basis of the Roman soil, belong to a very extensive tertiary formation, to which Brocchi has given the name of the sub-Apennine hills, and which, as he has shown, begins in the territory of Lucca, and stretches along the western coast of Italy, with few interruptions, as far as Reggio in Calabria. The fragments of the older rocks, which form the sandstone and conglomerate of the Janiculus and the contiguous ridges, were brought down by the sea from the neighbouring Apennines, and the inequalities thus produced determined the course of the Tiber. The products of volcanic agency appear everywhere above this formation, never inclosed in it, and thus are proved to belong to a later period. Rome itself lies between two of the most important points in the volcanic line, which has been traced without interruption from the borders of Tuscany to Campania—the extinct craters of the Monti Cimini, between Viterbo and Bolsena, toward the north, and those of the Alban range to the south. That the volcanic rocks of the Roman hills had issued from one of those vents has been generally admitted: for an hypothesis of Breislak, according to which the Forum itself had been the crater that sent them out, is refuted, not only by the aspect of the ground, but by the decisive fact, that the tufa of this region is not lava, as appears clearly both from its composition and its regular stratification. The Alban hills might, at first sight, have seemed the centre to which it might most naturally be referred; but more accurate inspection has proved that their volcanic productions were of a different kind, not comprising either the lithoidal tufa or pumice, while, on the other hand, their peperino is scarcely to be found at Rome. But the Monti Cimini, and the hills round the Lago di Bracciano, appear to have discharged exactly similar substances, which strew the whole tract between them and the city, and are not found further south.

Brocchi and L. v. Buch agree in believing that the Roman tufa owes its present appearance to the action of water; but they differ on the further question, whether the effect was produced by the sea or by the river. The superposition of beds of tufa on regularly stratified travertino, which occurs in almost all the hills of Rome, led the latter geologist to

conceive, that the formation of these two very different rocks was nevertheless simultaneous. Brocchi was led to the opposite conclusion, by observing the great extent to which the Roman tufa is spread over the volcanic zone of Italy, being continued regularly from the hills near Santa Fiora, in Tuscany, to the plains of Campania, and thus inferring a corresponding diffusion of the waters which deposited it. It also occurs in islands and tracts that are either entirely destitute of fresh water, or very scantily supplied with it, as Ischia, Procida, Lipari, and the Valle di Noto, in Sicily. This opinion receives still stronger confirmation from the remains of marine animals, that are found at considerable heights inclosed in the tufa. And as the Italian volcanoes, since they have ceased to be covered by the sea, have never produced similar masses, Brocchi thinks it certain that the old tufa was either thrown up from submarine volcanoes, or, at all events, was received and carried along by the sea, and he explains the perplexing phenomenon which prevented Von Buch from taking the same view of it, by supposing that the tufa, which now either rests on beds of travertino, or contains fresh water productions, is no longer in its original state, but had been decomposed, and removed from its primary site, by the same streams which brought down the elements of the travertino, and afterwards had been cemented again by chemical agency; and he, therefore, distinguishes the tufa, which he imagines to have been so formed, by the name, *tufa ricomposto*, though it is only by the circumstances of its position that it can be discriminated from that which he terms *tufa originale*.

After the sea that once rolled over the Roman Campagna had retired nearly within its present bounds*, and the internal convulsions of the earth had for a time subsided, a period ensued, the traces of which are distinctly visible in the last of the three formations above described—a period during which the Tiber must have formed a lake on the site of Rome, more than one hundred and thirty feet higher than its present surface, and differing widely from the river as it now flows, both in the nature of its mineral deposits and in its organic contents, which were such as belong either to stagnant waters or to very sluggish streams. On the other hand, signs also occur of a state of violent agitation interrupting this period of repose, in numerous large masses of conglomerate, which are found at considerable heights resting

* In speaking of the retreat of the sea, we only mean to describe a fact, without expressing any opinion as to its cause, which geologists are now generally agreed in referring to the elevation of the land.

on the travertino. The Tiber is no longer able to bring down to Rome fragments such as compose these masses: it deposits its coarser gravel at a distance of thirty miles, and the finer at twelve above the city, and thenceforward, to its mouth, is only charged with the fine yellowish sand from which it derived its constant epithet:—

In mare cum flava prorumpit Tibris arena.

Whether the gradual retreat of the sea, or a sudden and violent convulsion put an end to this period, and laid the basin of the river open for the habitation of man, is one of the secrets which will perhaps always elude the researches of scientific inquirers.

The physical introduction concludes with an essay by the editor on the quality of the Roman air: a subject which as connected, on the one hand, with the nature of the soil, and, on the other, with the history of its population, could not have been introduced in a more appropriate place. The great questions which have divided the opinions of Italian and foreign men of science on this most interesting point are, whether the pernicious effects commonly attributed to the air of the city and the Campagna do really and exclusively arise from it; and if so, what are the precise causes and the possible remedies of the evil? Some writers contend, that the actual malignity of the air is chiefly owing to adventitious causes, depending on the want of proper cultivation of the soil, and tending to produce the putrefaction of organic substances and the consequent emission of deleterious gases, and that it might be corrected by a judicious system of draining and planting, and otherwise sheltering the country from the influence of such causes. A Milanese professor, Moscati, believed that he had detected the base of the noxious vapours exhaled from the rice-grounds of notoriously unhealthy districts, in a mucous substance, which floated on the surface of the fluid, obtained by condensing such vapours. Brocchi was induced by this report to institute a similar experiment at Rome, and for this purpose he boldly passed four nights in the month of September at the basilica of S. Lorenzo *fuori delle mura*, one of the most unhealthy spots in the neighbourhood of the city, at a time when the convent was deserted by all its clerical inmates, except a single priest, who was left in charge of it, to struggle as well as he could with a tertian fever. Brocchi has given an amusing description of his operations in a memoir annexed to the above-mentioned work, which is accompanied by another, *Sulla condizione dell' aria di Roma negli antichi tempi*. His experiment failed to exhibit the phenomenon described by

Moscati; but he candidly acknowledges that it is not conclusive, as the quantity of the fluid employed might not have been sufficient, or the subtlety of the noxious principle might have eluded his analysis. His opinion however is, that no agricultural methods can ever entirely extirpate the noxious quality of the air, as it depends chiefly on the unalterable features of the Campagna, the inequalities of which must, he conceives, always oppose an insuperable obstacle to any effectual drainage. But he believes that the evil might be so far mitigated, by recurring to the practice of the ancients in wearing woollen clothes next the skin, that the desolate region which, for so many ages, has been abandoned by almost every sign of human life, might again be peopled by a healthy and robust race. The change of fashion in this respect, which began even in the time of Augustus, he is inclined to consider as the most truly dangerous *aria cattiva*, since it has deprived the modern Romans of the safeguard which protected their ancestors, whose pores were screened by their heavy but useful togas from the germs of disease floating in the atmosphere, and without this precaution always liable to be absorbed into the animal frame, but more particularly during sleep, when the cutaneous organs that admit them are known to be most active. He also thinks that chlorine might be successfully used as a preservative or a remedy.

The facts and reasonings stated by Mr. Bunsen show that the truth does not lie exclusively on either side. The Roman fever appears to differ only in degree from that of the West Indies, where it has been observed that heavy rains render marshy grounds healthy, while they have the contrary effect on districts that were before dry, though no putrefaction of animal or vegetable matter could have taken place. Hence it has been inferred, that this latter cause does not produce the Roman malaria, and that it does not even arise from stagnant water, but from the moisture which remains in the ground after its crust has become dry, and which, under the heat of a southern climate, engenders a noxious atmosphere. Still this cause does not exclude the former; and in the plains of Latium both are probably combined with the want of free ventilation, and the action of stifling and relaxing winds, which increase the moisture of the air and the grounds. To this peculiar humidity of the Roman atmosphere may probably be ascribed the extraordinary difference of temperature between places in the sun and in the shade, which all travellers must have observed at Rome, and which exposes them to the most dangerous alternations of heat and

cold. The singular variations observed in the salubrity of different houses in the same street, and of different stories in the same house, point to the general result, that the source of disease is the immediate vicinity, not of water, but of the ground, or of trees injudiciously planted, so as to obstruct the current of the air. On the other hand, a popular opinion, which Brocchi laughs at as a vulgar prejudice, as to the utility of plantations, appears to be well-grounded, provided they be so situated as to intercept only noxious effluvia. But he seems to be fully justified in the importance he attaches to the use of a woollen dress, and his reasons are confirmed by the experience of the monastic orders which are confined to such a one by their rule, as well as by that of negroes and cattle, whom nature has provided with a similar protection in their skin and hides.

The situation of Rome itself appears to be generally healthy ; nor is there any reason for supposing that, independently of historical causes, an unfavourable change has taken place in the air of the surrounding country since the time of the ancients. The only circumstance in which any alteration is observable, is the severity of the ancient winters. The sight of Soracte covered with snow, was undoubtedly an extraordinary occurrence at Rome in the days of Horace : but the ice, which is said at times to have choked up the river there, would now be as great a prodigy as in the Nile. The city, however, was formerly believed to present a striking contrast to its immediate neighbourhood in the quality of the air : and hence Cicero (*De Rep.* 2, c. 6) applauds the sagacity of its founder for selecting a salubrious site in the midst of a pestilential region. The atmosphere of the plain was undoubtedly always, as it is now, thick and impure ; and the advantage enjoyed within the walls may be ascribed to the great works by which the kings and the emperors provided at once for the security, the comfort, and the health of the citizens ; to the mounds, walls, sewers, aqueducts, and porticoes. But without the walls, before the enormous possessions of rich individuals and the calamities of the later times had converted the Campagna into a desert, with due precautions as to diet and dress it was safely habitable at all seasons, as it would be again, if it were distributed into small portions, cultivated by independent and industrious owners. There is no reason for doubting the truth of the tradition recorded by Pliny, that under the dominion of the Volscians, the Pontine Marshes could boast of thirty-three flourishing towns ; or of Strabo's statement, that, with the exception of some marshy spots near the coast, the plain of

Latium was a healthy tract. Such, we learn from Mr. Bunsen, experiments made by a wise and benevolent individual* have proved it may be made; such, therefore, we may hope it will once more become, when man shall have earned the mastery over nature, by asserting his own freedom.

The second book, containing the historical introduction, opens with a sketch of the growth and decay of ancient Rome, and of the restoration of the modern city, from the pen of Niebuhr, and bearing all the marks of his master-hand, which conducts the reader with magical rapidity, yet without omitting one important step, through the history of the city, from the first settlement on the Palatine down to its occupation by the French. We say no more of this admirable production, which is too condensed to admit of abridgement; and, where all is equally interesting, it is difficult to select. We abstain from the attempt with the less reluctance, as the essay has been published in the author's *Kleine Schriften*. The remainder of this book contains a survey of the principal periods in the topographical history of ancient and modern Rome, which is illustrated by two tables, printed separately, as an accompaniment to the first volume. One table exhibits in six columns the dates of the leading political and topographical events, and of the public buildings of various classes in the ancient city. The second, in four columns, continues the synopsis from the reign of Constantine to that of Leo XII. We shall follow the same thread, but hastily, and only touching on some points which are either new or peculiarly interesting.

After the Tiber had settled within its present bed, the valleys at the foot of the Seven Hills were long covered in their deepest parts with stagnant pools, which were fed by the frequent overflows of the river, and by the springs in their neighbourhood. Such pools were the great Velabrum, in the low ground between the Palatine and the Aventine, the Lacus Curtius, and the lesser Velabrum, between the Palatine and the Capitoline. The Field of Mars was likewise partially under water, as is testified by the names of the Palus Caprea and the Stagna Terentii, though the position of these pools cannot be precisely determined. These sheets of water, while they contributed to the security

* Some years ago the waste land about the village of Zagaruolo, in the Campagna not far from Palestina, was parcelled out by the proprietor, the Duke of Zagaruolo, at a fixed rent among the industrious inhabitants; since it has thus been brought into cultivation, the malaria, for which this district was once notorious, has disappeared. In justice to the Papal government it ought to be mentioned, that Pius VI. had taken measures for accomplishing a similar object on a large scale.

of the heights above them, did not render them unfit for habitation. It was only when they were reduced to the state of swamps that their effect on the air would become dangerous to such a degree as to render the drainage of this region, and its protection from inundations, absolutely necessary. In the midst therefore of these pools, and of the thick wood that clothed the sides of the Roman hills, remains of which were preserved to the eighth century in several consecrated groves, the ancient abodes of Faunus and the Nymphs, was the city of Evander, the cradle of the Roman state, first planted on the summit of the Palatine. It was protected chiefly by the steepness of the cliffs on which it stood, and only needed some artificial strengthening where an easier descent led down to the Velia, a long low ridge stretching away from the south-east foot of the Palatine toward the Suburra, and parting the valley of the Forum from that of the Coliseum. The first enlargement of this narrow compass appears to be indicated by the outline which Tacitus, whose description is evidently grounded on accurate investigation, assigns to the *Pomerium* of Romulus (Ann. xii., 24). It must be remembered that this term, though etymologists connected it with *murus*, was one of purely religious import, and did not necessarily, or, for many ages, in fact, denote a limit corresponding to the walls of the city, but only that within which the auguries might be properly taken*.

The circle described by Tacitus is not perfectly continuous : a break occurs between the eastern boundary of the Forum and the opposite edge of the Velabrum. This perplexing deficiency was first explained by Niebuhr, who observed that the ground omitted must, before the building of the sewers, have been a pool or a morass, which needed no fortification, and could be turned to no use. The festival of Septimontium preserved the memory of a period in which a further addition was made to the space said to have been inclosed by Romulus, when the Latin town, the neighbour and rival of a Sabine one on the Quirinal, comprehended the Cœlius and Esquiline with the Palatine. It did not include the Aventine, probably because this was the centre of union for Rome with the other towns of the Latin confederacy. The two cities met in the valley, where a Janus, closed in peace and open in war, marked at once their union and their independence. The four regions of Servius Tullius, corresponding to the four tribes into which he distributed the plebs, included the Quirinal, but not either the Aventine or the Capitol, which,

* Niebuhr believes that it originally signified a suburb taken into the city, and included within the range of its auspices.

though on different grounds, were kept distinct ; the latter, probably, as a spot of peculiar sanctity. Varro connects this local division with another into seven-and-twenty smaller districts, of which he reckons six in each region, and which contained as many ancient sanctuaries, called the Chapels of the Argeans, a name probably derived from the remotest Pelasgian antiquity, and associated with rites which tradition referred to Numa and to Hercules. Thirty figures so named were solemnly thrown every year into the river, as substitutes prescribed in the room of human victims. And hence Mr. Bunsen conjectures, first, that the three sanctuaries not included in Varro's account of the four regions belonged to the Capitol, where the mythical Argeans were said to have settled, and where the temple of Jupiter contained three cells : and next, that the remaining three, which seem to be wanting to complete the original number, had once existed on the Quirinal, which is denominated the ancient Capitol. He also observes, what appears never to have been noticed before, that the fourteen regions of Augustus were determined by this old parochial subdivision. The Argean chapels were represented by the *ædicolæ*, which corresponded to the number of *vici* that in different ages composed the city ; and as we know that there were twenty-seven of these sections in Rome under the kings, so we learn from later documents, that there were about three hundred of them in the capital of the Cæsars.

Of the works attributed to the kings,—the Mamertine gaol, the circus, the embankments, walls and mounds of Servius and the two Tarquins, and the *Cloaca Maxima*,—with the exception of the last, no remains have been preserved which can be distinguished upon safe grounds from restorations of later ages. The antiquity even of the last mentioned stupendous monument has been questioned by a writer of great reputation (Hirt, *Alte Baukunst*, I., p. 189), to whom we suppose Mr. Bunsen alludes. Hirt observes, that though Livy and Dionysius, and Pliny (N. H. xxxvi., 24), speak as if the work had been executed in the time of the Tarquins on the same gigantic scale which its remains exhibit at this day, there are insurmountable objections in the way of such a supposition. In the first place, both the great canal and the smaller ones display the arch in perfection, which is said to have been a later invention of the Greeks ; and secondly, travertino, which the Romans only began to employ at a subsequent period, has been used in the masonry of the mouth. Mr. Bunsen, on the other hand, thinks it demonstrably certain that the work, in its present form and dimensions, belongs, as the uniform testimony of tradition declares, to the age

of the Tarquins. Only a comparatively small part of it is now accessible to inspection ; but from the uses to which it was destined it may be safely inferred that it must have been carried, in numerous ramifications, under a great part of the ancient city : and its foundations were certainly laid at a depth of more than forty feet. After several other works of a similar kind had been executed under the republic, this continued always to be distinguished by the epithet of *the greatest*, or else was emphatically called *the Cloaca*. The accounts transmitted to us of such undertakings in the republican period speak only of the cleansing and repairing of the old sewers (*ἀράχθαποις, ἐπισκευή*, Dionys. iii. 67—*detergendas, qua opus esset, cloacas*, Livy, xxxix., 44) ; and the sum mentioned by Dionysius in the passage just cited, as a remarkable proof of the magnitude of the work which it cost so much to repair (1000 talents), would be absurdly small, if considered as the sum applied to the building of the great sewer. Mr. Bunsen also remarks that such a work would have been scarcely possible, after the restoration of the city that followed its capture by the Gauls, when the new streets were irregularly built across the subterraneous conduits, which had been originally planned to follow the course of the old streets. The result to which this evidence leads is moreover confirmed by the nature of the material, which, as Mr. Bunsen states, is not either peperino or travertino, but the Roman tufa, which afterwards fell into disuse. And he therefore conceives that the difficulty of supposing so early a knowledge and application of the arch in Italy ought not to be allowed to disturb a conclusion which rests on such solid grounds, especially as very early specimens of vaulting occur in Etruscan fortifications, though it appears to have been practically unknown to the Greeks for a century and a half after the time of the elder Tarquin ; while the fact, if admitted, renders the Roman monument additionally interesting for the history of the arts.

We pass over the history of the city during the republic, only remarking, that the meanness and deformity of the streets and private buildings occasioned by the Gallic invasion, heightened by contrast with the increasing magnificence of the public edifices, continued till the reign of Nero, even after the alterations and additions by which Augustus gave the city a marble front. He appears to have done little more than carry into execution the plans of the great Cæsar, who, if he had lived long enough, would probably have accomplished still more important changes : for he had meditated turning the course of the river, so as to take the Vatican plain

into the Field of Mars. Nero's fire, which broke out on the anniversary of the Gallic conflagration, destroyed much that the frantic despot was unable to restore: not only splendid works of republican and imperial architecture, and venerable monuments of Roman antiquity, but invaluable productions of Grecian art. The city gained, indeed, by the symmetry prescribed by the emperor in the new plans, and by the police regulations which he established: yet it was doubted even at the time, whether the old narrow streets, with their high houses, were not more conducive to the health of the inhabitants, than the broad spaces which were laid open to the sun in the new quarters. The compass of the city was enormously increased by this event, and Pliny has recorded a survey taken in the year 828, by which it appeared, that its buildings (which, according to an important remark of Niebuhr, must be the meaning of the word *mænia* in this passage of Pliny, H. N. iii. 5, as it is in several others) filled a circuit of more than thirteen miles. Succeeding emperors, down to the reign of Constantine, contributed to the magnificence of the capital, chiefly by buildings dedicated to the pleasures of the populace, whom the policy of a despotic government provided with luxuries, which otherwise would only have been within the reach of the largest fortunes.

A survey of the principal epochs in the topographical history of Christian Rome is introduced by a dissertation on the origin and authority of the collection of lives of the Popes, commonly ascribed to Anastasius; a book, which is the main source of our information on the early works of Roman ecclesiastical architecture, and the changes produced by them in the aspect of the city; and by an interesting account of the ecclesiastical and civil divisions of modern Rome. It has been a favourite opinion of some antiquaries, that the seven ecclesiastical regions into which the city is said to have been first divided by S. Clemens in the first century, corresponded to the fourteen of Augustus, so that each of the former contained two of the latter. This supposition, however, is not confirmed by an accurate examination of their several limits, nor is it at all necessary to explain the fact. The number seven was probably suggested by the example of the primitive church at Jerusalem, and adopted at a time when Christian congregations were not to be found in all the fourteen regions. But from it was derived the number of the seven Palatine judges, who represented the emperor in the election of the popes, as well as that of the cardinal bishops, and, as Niebuhr conjectures, that of the German electors. Nor have the fourteen Augustan regions any historical con-

nexion with the modern *rioni*. Twelve was the prevailing number in the civil constitution of the Christian city: the quarter of Trastevere was long distinguished from the twelve regions of Rome as a distinct town, which appears for the first time in the latter half of the fourteenth century as a thirteenth rione: though a change, the origin of which has not yet been discovered, had taken place before in the division that existed in the twelfth century, when the first region took its name from the Coliseum, whereas the present series begins with the Rione di Monti. The last of the modern sections, the Rione del Borgo, was added to the rest by Sixtus V. It had previously been kept apart by the jealousy of the Popes, as their peculiar domain, the inhabitants of which had no claim to the franchise of Roman citizens. But when the latter had lost all value, the municipal government having become absolutely dependent on the Papal court, Sixtus annexed the Leonine city, as the fourteenth rione, to Rome. It is remarkable that the old distinction between *montani* and *pagani*, which took its origin in the ancient septimontium, appears to be kept alive to this day by the inhabitants of the first rione (di Monti)*, who form a community marked by a peculiar dialect and manners, and are designated by the name of *montigiani*, while they themselves, like the people of Trastevere, nickname the other Romans *paini*.

Among the various causes that have contributed to the ruin of Rome, since it ceased to be the seat of empire, the devastations of the northern barbarians, though they have been, more frequently perhaps than any other, a subject of rhetorical lamentations, were the least considerable in their effects. The Goths and Vandals were insatiably greedy of the treasures amassed by the mistress of the world; but they were never tempted to search for them, like the Turks, under ruins; and when they had stripped the temples and palaces of the precious metals that adorned them, they inflicted no further injury on the walls or columns. After Alaric and Genseric had spoiled the city, the secretary of Theodoric could still dwell with rapturous admiration on the marvellous beauty and splendour of its buildings, and even on the multitude of its statues. The Gothic kings who succeeded Theodoric protected, and even repaired its monuments; and even Justinian's invasion, though more disastrous than the victories of the barbarians, caused no material mischief beyond the razing of a part of the walls, with which Totila, in the heat of a just resentment, magnanimously contented him-

* It includes the Quirinal, Viminal and Esquiline, with the intermediate valleys.

self. The zeal of the Christians, which from time to time defaced the pagan temples, and deprived them of their ornaments, in order to adapt them to the purposes of the new religion, was a more permanent cause of destruction ; but, on the other hand, was limited in the objects and mode of its operation. It was not only directed chiefly against a certain class of buildings, and in them to a change which might often be considered as conservative rather than destructive, but was also long subject to external restraint. After the worship to which the temples were consecrated had ceased to be tolerated, they were still protected as state property by the imperial laws ; and even the images which had been the objects of idolatrous reverence, when degraded from their sacred rank, were still permitted to adorn other public edifices or places. So long as the sovereignty of the Greek emperors or the exarchs was acknowledged, the popes themselves could not dispose of the public monuments, even for pious uses, without the permission of their temporal superiors. Accordingly, Boniface IV. was obliged to obtain leave from Phocas before he converted the Pantheon into a Christian church ; and the same evidence, which proves that St. Peter's was ornamented with the spoils of paganism, also informs us that, in each instance, the transfer was made by imperial license. These facts enable us to appreciate the credibility of the legends by which writers of later ages thought to enhance the glory of Gregory the Great, when they related, that, in a transport of holy zeal, he had demolished all the ancient monuments, which might have disturbed the devotion of the pilgrims who came to adore the relics of the apostles ; and that he set an example to Omar, by burning the library of the imperial palace on the Palatine. It is true that a time came when the power of the popes was entirely freed from foreign control ; but then the religious animosity, which at an earlier period might have instigated them to acts of wanton devastation, had cooled from the want of fuel : thus heathen monuments were viewed with indifference, and were applied to ecclesiastical purposes only from economical motives.

Had no other causes than these been at work, the sight of the fallen city would scarcely have awakened the complaints of Petrarch or of Poggio. But the most destructive ravages, those which effected the most sweeping changes in the face of Rome, arose from the feuds of the Roman barons and the contests between them and the popes, and between the popes and the emperors. In the tenth, eleventh, and twelfth centuries, it was usual for the popes to grant the ancient monuments which were capable of being converted into strongholds,

to the nobles who espoused their cause, and the latter did not fail to make a proper use of these valuable possessions. The mausoleum of Hadrian had been long before transformed into a fortress by Belisarius, and, during this period, all the most important public buildings appear to have been applied to the like purpose. It may be supposed, that, in fortifying these holds, little attention was paid to their external appearance, and that as little respect was shown to them by the enemies of their possessors. The razing of a house or castle of a political adversary was an ordinary occurrence in the feuds of the middle ages, and at Rome such a measure was never retarded by the thought, that the condemned building had been a temple or a theatre, a mausoleum or a triumphal arch. The most memorable of all the achievements of this kind on record was that of the senator Brancalcone, who, in the year 1257, to weaken the noble families, destroyed at once one hundred and forty ancient monuments which had served them as fortresses*. It is only surprising that so many should have been left standing after the calamitous siege laid to the city by the emperor Henry IV., and the still more ruinous conflagration that attended the entrance of Robert Guiscard and the half Norman, half Saracen army, which he brought to the assistance of the pope. Yet even after these desolating inroads, a pilgrim, who visited the city at the beginning of the next century, could exclaim: *Non tamen annorum series, non flamma nec ensis Ad plenum potuit hoc abolere decus: Tantum restat adhuc, tantum ruit, ut neque pars stans æquari possit, diruta nec refici.*

The residence of the Papal court at Avignon, though it exposed the Romans to all the miseries of oppression and anarchy, and withdrew the means of keeping even the Christian churches in repair, operated rather indirectly than immediately to the detriment of the ancient monuments. It may be considered as having contributed to their ruin, in the same degree in which it conspired to increase or perpetuate the extraordinary barbarism, which signalized the Romans in the middle ages above the inhabitants of perhaps all the other Italian cities. A thicker darkness of ignorance, accompanied, as might be expected, by a proportional ferocity of manners, hung over the capital of Christendom, than over any other part of Italy, or perhaps of Christian Europe.

* Gibbon (c. 69 and 71) describes the buildings destroyed by Brancalcone as mere towers, and seems to suppose that they were only constructed from ancient materials. A passage quoted by Mr. Platner from an early writer, Albertinus Mussatus, who says that almost all the baths and temples that had been preserved to the time of Brancalcone were demolished on this occasion, places the event in a different point of view.

The light of letters, feeling for the arts, reverence for departed greatness, penetrated more slowly here than elsewhere ; and hence, after men had arisen touched by the spirit of the ancients, and capable of estimating the value of their relics, the Romans were so utterly indifferent about their remaining treasures, that in the fourteenth and fifteenth centuries they frequently sold the most precious ornaments of their public buildings to be transported to foreign cities, where a taste had been awakened for such acquisitions. During the same period, the surviving monuments of antiquity were continually subjected to the most ignoble species of mutilation and gradual destruction, by being converted, *calcis in obsequium*, into materials for the limekilns : a sordid violence, which justly excited the indignation of intelligent spectators, more than all the ravages of intestine feuds or hostile invasions. The Coliseum, in particular, is well known to have suffered more from this than from any other cause, and it is perhaps to this period that we ought to refer the loss of the metal links which connected the stones of that vast building, the removal of which has been, it should seem, very unjustly imputed to the avarice of the earlier barbarians, who had before them objects of greater value, and more easily appropriated, in an abundance which all their rapacity was unable to exhaust.

The end of the thirty years schism, by which Rome became the fixed seat of an undivided spiritual monarchy, and was enriched by the overflowing of the streams that were continually poured from all parts of Europe into the papal treasury, was the beginning of a new period of prosperity and splendour to the city. Since this epoch the attention of the Popes has, with little interruption, been actively directed to the reparation and embellishment of their capital. But the manner in which this praiseworthy spirit has manifested itself has varied with the character of the men and the bent of their age. In the period immediately preceding and following the rise of the Reformation, the taste for ancient literature and art was predominant at Rome, as elsewhere, and an enthusiastic and almost superstitious admiration succeeded the oblivion and neglect of so many centuries. But the ruins of the ancient city, though they were now viewed with more general interest, were a mine, which it required learning, judgment, time, labour, and cost to explore with advantage, and the opening of new streets and the erection of new palaces were deemed more pressing objects, and generally demanded some sacrifice on the part of antiquity. The fairest prospect that has appeared in modern times of an extensive and ju-

dicious restoration of the ancient monuments seems to have been overclouded by the death of Raphael. A letter addressed to Leo X., which has been ascribed to Castiglione and published among his works, but in which he appears, from internal evidence, only to have expressed the thoughts of Raphael, contains a project of such an undertaking drawn up by the desire of the Pope. This important document, which is annexed to the Historical Introduction, is interesting not only on account of the views of ancient and modern architecture unfolded in it, but also as evidence of the state of Rome in the time of the writer. After having regretted that so many monuments of ancient art, which had escaped the fury of the barbarians, had been destroyed by the predecessors of Leo, or carelessly abandoned by them to the stupid rapacity of men, who undermined their foundations for the sake of the earth at the bottom, and broke up their marble ornaments for mortar, he proceeds to deplore the havock of which he had himself been a witness. 'I cannot remember,' he says, 'without great sorrow, that since I have been at Rome, not quite eleven years*', so many noble monuments as the pyramid that stood in the via Alessandrina, that unfortunate arch, and so many columns and temples have been destroyed, especially by Bartolomeo della Rovere.' And he entreats the Pope to interpose his authority for the protection of the few remains that were still left to attest the ancient greatness of Rome. These private inroads appear at length to have been repressed, either by the coercion of the government, or the diffusion of a better feeling. But Raphael's plan was not accomplished, and after the Medicean period the ears of the Popes were no longer open to such proposals. A re-action, which may be pretty clearly traced to the alarm caused by the Reformation, took place in the course of the same century against the pagan taste which had so unnaturally prevailed for a time in the Vatican. New churches and palaces continued to rise, though in a rapidly degenerating style; but the preservation of the ancient monuments was less than ever a matter of paramount concern. Sixtus V., whose active reign produced many of the most important changes in the aspect of the city, was not, indeed, negligent of that object: he erected several prostrate obelisks, laid open the base of Trajan's pillar, and repaired that of Antoninus; but, with a zeal worthy of older times, he also made war on some heathen statues that still adorned the tower of the Capitol, and de-

* This is one of the internal marks which prove that Castiglione can only have lent the assistance of his pen to the author of the letter: he himself never made so long a stay at Rome.

liberately sacrificed to his plans some interesting remains both of pagan and Christian antiquity. The same want of classical sympathies unfortunately showed itself in several of his successors, who were most distinguished by their love of building. And though, in the latter half of the last century, the papal government was animated by a different spirit; and by the most liberal patronage, and the most magnificent undertakings, especially by the foundation of the Museo Pio-Clementino, laboured to draw all votaries of the arts to Rome as their common European shrine, still the principle of preserving the remains of antiquity, as a precious and sacred inheritance, with reverential care, can scarcely be said to have been ever distinctly recognized till within the present century. The measures of Pius VII., and his successors, afford some ground for hope, that this simple maxim, the neglect of which has occasioned so many irreparable losses both to history and the arts, will not again be wantonly violated. But it is melancholy to reflect, that this late wisdom appears to have been the fruit of bitter experience, which has suggested the thought that even the treasures of Rome are not absolutely inexhaustible, and that it is prudent to husband them before it be yet discovered that they may be counted. The treaty of Tolentino seems first to have given a lesson of economy, that has not been lost upon the Romans. Unfortunately, their museums, palaces, and churches were stripped of their most precious ornaments, not merely to grace the triumph of the conqueror, and to attract the gaze of Europe toward a different scene, but often to satiate the rapacity of individuals; and the spoil, if it was not irreparably damaged in the transfer, was at least irrecoverably buried in private cabinets. Of three thousand pictures or statues which were proved to have been transported out of the territory of the church, besides those ceded by the treaty of Tolentino, only twenty-two returned to Rome. The magnificent collection of coins and gems was entirely exempted from the claim of restitution by the treaty of Paris, as private property of the restored French King, and many fell into private hands. In many instances, the pleasure of recovering a celebrated picture or manuscript was embittered by regret for the change it had undergone during its absence. The imperial government, however, in some measure compensated this loss and mischief, by the instructive and animating example it held up to that which succeeded it, in its extensive repairs and judicious excavations.

As it was not our design in this review to give a complete analysis of the work before us, but only to enable our readers

to understand its plan, and to form some conception of the nature of its contents, we here terminate this notice. We stated at the outset, the principle on which we have made our selection among the various subjects presented to us; and when we consider the important place that Roman history justly holds in every system of liberal education, we do not fear lest the details into which we have entered should be thought foreign to the plan of our Journal. We must, however, add, that to a very large class of readers the third book of the Introduction,—which contains a series of essays on the sculptures of the Roman museums, on the history and ornaments of the Catacombs, on the form of the Christian Basilicæ, and, finally, an elaborate review of the progress of the arts in Rome from their revival to the present day,—will probably be still more attractive than those on which we have dwelt. We will at least venture to promise all those who may take an interest in such disquisitions, that in the treatment of these delicate subjects, they will find nothing trivial or crude, nothing fanciful or exaggerated; but that they will enjoy the mature fruits of a highly cultivated taste, and the well-weighed results of long and accurate study. Nor ought we to pass over in silence, though we were unable to transfer any tinge of it to our own brief sketch, the truth and liveliness of Mr. Bunsen's local descriptions,—a charm arising from the author's long familiarity with the scenes described, and which cannot be fully enjoyed by readers who are strangers to them; but which we think will often recall the most striking features of Rome and the Campagna to those who have beheld them, with a freshness which could scarcely be reached by the pencil.

ELEMENTS OF PHYSICS.

Elements of Physics, or Natural Philosophy, general and medical, explained independently of Technical Mathematics, and containing new Disquisitions and practical Suggestions. By Neil Arnott, M. D. Two volumes. Fourth Edition. London, 1829.

THERE is nothing in which the acquirements of the present time differ so much from those of former periods, as in the extent and variety of subjects which an educated man is generally expected to know. Even the lighter literature of

the day abounds in allusions and illustrations, drawn from matters, with which, a hundred years ago, none but the scholar or man of science had any acquaintance ; and the natural history and physical peculiarities of the countries through which they pass, form a principal object in the inquiries and amusements of a large proportion of those who travel merely in search of pleasure. The circle also of these researches is continually widening, and the discoveries of philosophers, instead of being locked up and remaining unknown for years, except to a few retired and laborious students, have their results reduced into a popular form, and become part of the common currency of the educated world.

The necessary consequence is, that with a very wide diffusion of *some* knowledge, there is a great deal of vague and inaccurate information. A smattering of information on a large variety of subjects is thought to be almost indispensable ; and a smattering only is too frequently all that is attained : and it is probable that the complaints so frequently made of the decay of real eminence in science or learning may not be entirely without foundation, although exceedingly exaggerated, and that the attention, which has so many subjects presented to it, may seldom be sufficiently concentrated upon one.

If, however, it has become impossible for any, except those who have a large measure of time and talents at their disposal, to gain more than a very slight and superficial knowledge of much which they are expected not to be ignorant of, it is of great importance that every available means should be urged to guard against the loose and inaccurate habits of mind which such knowledge is apt to produce. And for this purpose it seems very desirable that the distinction should be fully and frequently impressed, which exists between the knowledge of a thing, and a knowledge about it ; and that, whenever knowledge must be confined to the latter and inferior kind, the learner should at least be made to understand its deficiency, and learn how far he may trust it. For this purpose it will be very desirable that something at least should always be well and completely taught, not on the principle of M. Jacotot, that the learner may refer every thing to it, and find all future knowledge involved and contained in it, but that he may at least have a high standard to which to refer his acquirements, and may know practically, from the contrast between the familiarity and certainty of his reasonings and conclusions on one subject, and their doubtful and unsatisfactory character on others, the different degree in which he understands two different things. Besides this,

it will be very necessary that every work which gives only imperfect and uncertain knowledge should be carefully deprived of the pretension to give any thing more ; that the statement of results should be carefully distinguished from the investigation of processes, and that the loose arguments drawn from analogy and probability should not pretend to the character of strict demonstration.

If these remarks be correct, they will obviously apply with peculiar force to a work which professes to give an introduction to the whole system of physics, without resorting to technical mathematics ; and it is, therefore, of some importance to examine whether Dr. Arnott's work, which has deservedly met with a very extended circulation, is properly guarded on this material question ; and if it be not, to point out the qualifications with which it ought to be received. If the author has not sufficiently attended to the distinction which we have suggested, the error does not so much arise from any indifference to its importance, as from an undue appreciation of the powers of the method which he has adopted : for Dr. Arnott's theory, which appears even in his title-page, is—

‘ That what may be called *the mathematics of common sense or experience*, and which may be expressed in ordinary language—as distinguished from *technical mathematics*, which has its peculiar language—is perfectly sufficient for the explanation of all the great laws of nature.’—*Preface*, p. vi.

And again :—

‘ There are few persons in civilized society so ignorant as not to know that a square has four equal sides, and four equal corners or angles ; that every point in the circumference of a circle is at the same distance from the centre, &c. Now so much of unity, simplicity, and harmony is there in the universe, that such obvious truths as these are what give exact cognizance of the most important circumstances in the phenomena and states of nature. And indeed the science of quantity, in its highest flights, being merely comparison of the various simple standards (which have been previously stated to be numbers, and the ordinary measures of length, surface, and bulk, and the common plane and solid figures) among themselves, or with other forms and quantities ; and the standards being now familiar to all men living in civilized society, because types or examples of them are continually under view, almost every person arrived at years of discretion knows them well, and therefore is really acquainted with the great fundamental truths of mathematics.’—*Introduction*, p. xxix.

And accordingly, in a scheme of the natural and most expedient order of study, we find physics placed at the commence-

ment; and then the learner, beginning in childhood, is conducted through chemistry to the philosophy of life, thence to that of mind, including language; and, finally, as 'a fifth and subsidiary department of human science,' to 'the science of quantity or the mathematics.' It is obvious that, according to this scheme, this latter department would not be reached at all, except by a very small proportion of students; and consequently, if Dr. Arnott's proposed system is to be considered as giving real knowledge of its subjects, it must be on his own principle of the absolute sufficiency of 'the mathematics of common sense.'

We certainly entertain a different opinion, and think that the only knowledge of many of the subjects comprised in the work before us, which can be obtained without technical mathematics, is that which we have qualified as knowledge *about* them; and it is principally with reference to this question that we purpose to examine Dr. Arnott's work. We do not therefore propose to enter into any critical examination of the general merits of its execution, or even to discuss whether his projected scheme of education be a wise one, but merely to try, by the test of his performance, the sort and degree of knowledge which his principles, by themselves, are fitted to supply. For this purpose it will not be necessary to refer to more than a small portion of the work; and as the doctrines of mechanics stand first in order, and are more simple than those of hydrostatics, pneumatics, &c., we shall merely confine our attention to the exposition given of the former. If that be incomplete, the others must be so also.

It is, however, right to observe, in the first instance, that whatever the result of this investigation may be, it will leave the value of a large portion of the work before us entirely unaffected. It is generally written in a lively and agreeable style, though there are passages both of eloquence and of pleasantry, some of which might perhaps be expunged, and many certainly altered with advantage. The explanations also of many delicate and curious principles and contrivances are singularly lucid and intelligible. Above all, it possesses the merit of illustrating the principles which it lays down by a remarkable variety of experiments and observations, some striking from their circumstances and importance, but the most part, and to these we attach the greatest value, distinguished by their familiarity and continual occurrence. We know no work so likely to produce a habit of referring the everyday occurrences of life to the general laws of which they are instances, nor any habit

more useful, both for the familiar knowledge of the observations of nature which it produces, and for its general effect, as an exercise of the mind. It is of course impossible to exhibit this latter excellence of Dr. Arnott's work by extracts; for it does not consist so much in the ingenuity of any particular example, as in the general character of the illustrations; but we have great pleasure in bearing testimony to its existence, and in pointing out its great value in a book designed, as far Dr. Arnott's is so, for the purposes of education, and especially of that highest and most important part of education which respects not merely the communication of particular knowledge, but the formation of those habits of reasoning and thinking which are to regulate the general character of the mind in after life.

Thinking thus favourably of the execution of a large part of Dr. Arnott's work, we have no difficulty in taking it as a fair and favourable specimen of the sort and degree of instruction which can be expected on scientific subjects from treating them in the manner which he recommends and adopts. It may undoubtedly happen that, in many instances, in which we may point out an error, or looseness of demonstration, a stricter and more satisfactory proof might be devised without entering upon technical mathematics. Whenever this is the case, it may be said, that the defect is in the execution, and not in the system, and therefore furnishes no argument against the latter. We think, however, that the observation would be incorrect. Other writers, upon the same plan, might avoid particular errors into which Dr. Arnott has fallen; but it is not likely that a work of the kind will soon be written with greater care, or with greater ability; and the important practical question is, not what results the system possibly can, but what it is likely to produce.

We proceed, therefore, to examine the portion of the work which we have selected, and to inquire whether a student, taking it as his manual, and being told that it gives him accurate and sufficient knowledge, will not often be led into error. There are several ways in which this may be done. It will happen *directly*, if any of the results stated are erroneous in themselves; it will happen *incidentally* also, if any thing represented as proof amounts only to illustration; if it is inapplicable to the subject, or if the order of investigation is reversed, and the conclusion, to which we are led by the observation of certain facts, is stated as the reason of their existence. The latter causes of error are, for our purpose, most entitled to attention, because much of this evil arises from the assumption of a character of demonstration to which

they are not entitled. If treated as proofs, they will perplex the mind, if it sees their want of cogency; or they will corrupt it, if it acquiesces in them as absolutely sufficient. A similar result will follow if any thing be given as an instance of a particular principle, which really requires a different explanation; and the mischief is the greater in this latter case, because the greatest value of the work seems to consist in the habit which it inspires of referring all common appearances to their real causes or classes; and it is therefore the more important that it should not mislead as to the manner of doing so.

We shall not trouble our readers with the formality of classing the objectionable passages under their different heads of error, but shall merely select them in the order in which they occur, confining our attention in general to those passages which either most clearly exemplify the evils which we have enumerated, or, from their subjects and importance, render any mistake of peculiar consequence. A more minute discussion would hardly repay the labour of reading it, although, in the plan adopted, some material, as well as many less considerable errors will pass unnoticed.

The first passage to which we would call attention occurs in the Introduction, p. xvi. Among the facts which led to the discovery of gravitation, we are told, that 'it was found that bodies floating on water near to each other approached and feebly cohered.' And again, in p. 12. of the work itself, 'the general nature and extensive influence of attraction may be judged of from the following facts: logs of wood floating in a pond approach each other, and afterwards remain in contact. The wreck of a ship, in a smooth sea after a storm, is often seen gathered into heaps, &c.' The latter instance principally results from the manner in which the fragments, when driven together by wind or current, impede each other's motion, and get entangled together.

The true explanation of the former is this, that the water is raised all round the floating bodies by capillary attraction; that when they come within a certain distance of each other, there is not water enough between them to rise to so great a height there as on the opposite sides of the bodies, and that the greater *weight* of water on the outside therefore presses them together: an instance certainly of gravitation, but of the general gravitation of all bodies towards the earth, not of the two floating bodies towards each other. It happens singularly enough, that this was an experiment which Professor Vince used to introduce in his lectures at Cambridge, for the express purpose of warning against hasty conclusions; and when the

floating balls ran together, he would say, with Dr. Arnott, 'Now this looks very like attraction ;' but he went on to furnish the true solution.

There is serious objection to the passage in the Introduction in which the above instance occurs. It professes to give an account of the history of the discovery of gravitation, and deduces it from five classes of observation : first, the tendency of most things to fall towards the earth ; second, the existence of an atmosphere explaining the rising of some bodies ; third, the mutual action of bodies on each other, of which we have the instance already commented upon, and also that of the manner in which a mountain draws a plummet out of the perpendicular ; and the inference is deduced that all particles of matter act on each other, and the roundness of the earth is referred to this cause ; fourth, the roundness of the heavenly bodies, from which it is concluded that the same law obtains there ; and lastly, the influence of the sun and moon on the tides, from which it follows that these bodies, however distant, attract each other. 'Thus this sublime truth was at last made evident by the genius of the immortal Newton.' The same instances and arguments are repeated in pages 12 and 13 of the work, with the addition, in the case of the heavenly bodies, that their roundness '*proves* that all must, at one time, have been to a certain degree fluid, and that all are subject to the same law :' an argument again repeated, for a different purpose, in the second volume, p. 130.

The argument drawn from the form of the earth and heavenly bodies is very much overstated, since it can amount by itself to no more than this, that their shape *corresponds* to the existence of the law, and the supposition of the fluidity : it might, on the other hand, be that of their original creation, without resorting to either hypothesis for its explanation. With this exception, however, and that already made above, the arguments may fairly be used, as they are in the treatise, to prove the existence of attraction : for all experiments, though originally devised from the previous supposition of a principle, may fairly be used for its confirmation and establishment. But the case is different with the passage in the Introduction, which professes to give the history of the discovery : for, if taken as history, it is untrue, and almost impossible. The most delicate experiments there described not only were, but almost necessarily must have been, devised in consequence of the knowledge that gravitation existed : and particularly that of the plumb line was resorted to, not to try the existence of the principle, which was assumed, but to estimate the density of the earth by the proportion between

its force and that of the mountain. While circumstances, however, are introduced which did not tend to the discovery, that which did, the correspondence between the amount of attraction at the moon and at the surface of the earth, is omitted ; and the omission is the more to be regretted, because, not so much even from the importance of the discovery, as from the singular good faith and scrupulousness of the discoverer in the evidence which he required of its truth, it furnishes the most interesting chapter in the history of science. The full explanation perhaps could hardly be given so early in Dr. Arnott's work ; but then the narration should have been deferred.

The next passage on which we feel it necessary to comment is liable to a similar objection ; for here also the order of proof and discovery seems to be inverted. After explaining the philosophical action of an atom in the beginning of this treatise, and the few simple kinds of matter at present discovered, Dr. Arnott proceeds, ‘ It is a remarkable truth, that when different substances combine in the way now described, the proportions of the ingredients are always uniform, and such as to lead to the conclusion, that for every atom present of one substance, there is exactly one, or two, or three, &c. of the other. Therefore, if there be ten atoms of one substance, there are exactly ten or twenty, &c. of the other ; but never an intermediate number, as 13 or 23 to 10, *for then a particle of the compound would consist of one atom of the first, and of one and three-tenths, or two and three-tenths, &c. of the second substance, which is absurd, as the atom is indivisible.*’ Now we believe that this is a mere inversion of the order both of history and reasoning ; that the discovery of the law of definite proportions led to the atomic theory, not the theory to the law, and that it *must* have done so. There is no reason *à priori* for the existence of atoms, there is no *proof* of any kind that bodies are actually so composed ; but when it is found that the proportions in which different kinds of matter will combine with each other are always the same, this result corresponds with that which would follow from the supposition that every kind of matter is composed of ultimate particles, and that each particle of one kind of matter unites in a regular way with a certain number of the ultimate particles of another ; and this supposition, or mode of expressing the general fact, is adopted as a theory for its explanation. When such a thing is devised from a sufficient observation of facts, it is allowable to use it for the establishment of other particular results, but not to treat the theory as proof of the facts from which it is deduced, and to say that a contrary

result would be absurd, as the theory is true. For instance, we may fairly reason that, as gravity varies inversely as the square of the distance, the perturbations occasioned in the orbits of different planets by their action upon each other must be of such magnitude and nature ; but we cannot, unless we have established the law independently of the facts in question, fairly say, the heavenly bodies move in ellipses, and it would be absurd and impossible for them to do otherwise, for gravity varies inversely as the square of the distance.

The next passage to which we would direct attention is much too long to extract, extending from page 61 to 68, and containing a singular mixture of the faults and merits which we attribute to the work : merits, in the number and variety of the instances adduced, and the clearness of their expression ; faults, some of which we must exhibit more in detail. 'A body moving in a circle or curve is constrained to do what is contrary to its inertia. A person, on first approaching this subject, might suppose that a body, which for a time has been constrained to move in a circle, should naturally continue to do so when set at liberty ; but on reflecting that a circle is as if made up of an infinite number of little straight lines, and that the body moving in it has its motion bent at every step of the progress, the reason is seen why constant force becomes necessary to keep it there, and force just equal to the inertia with which the body tends, at every point of the circle, *to pursue the straight line*, called a tangent, of which that point is the commencement. The force required to keep the body in the bent course is called centripetal, or centre-seeking force ; while the inertia of the body tending outwards, *that is, to move in a straight line*, is called the centrifugal, or centre-flying force.' p. 61. With some slight exception perhaps to the manner in which it is assumed, that a curve may be treated as if made up of small straight lines, nothing can be clearer than the explanation of the necessity of a constant action of force ; but the definition of centrifugal force, and the deduction of the amount of centrifugal force required, are both of them erroneous. The centrifugal force, properly so called, is not the inertia of the body tending outwards, that is, to move in a straight line ; but it is only the tendency of that inertia to increase the distance of the moving body from the centre : it, therefore, is measured, not by the space which the body would move through in a very short given time in the direction of the tangent, but by the distance at which, at the end of that time, it would be from the circle. The centrifugal force, therefore, is a force, not equal to the inertia of the body in the direction of its motion, but to its

effect estimated in the manner already pointed out: a meaning which the words, 'the inertia with which the body tends to pursue the tangent,' may perhaps admit, if we interpret 'tends to pursue,' by 'resists any deviation from' the tangent; but this certainly is not their most obvious and natural sense.

These errors may perhaps seem of no very great importance, and rather to affect the verbal accuracy, than the real correctness of the passage. But any error connected with the use of terms so frequently employed as centripetal and centrifugal force is material, and the mischief thus produced is fully exemplified in the remainder of the pages at present under examination. They consist principally of a number of instances of the operation of these forces: some in which the terms are correctly used, some in which they are not: and the evil of the erroneous definition is perhaps greatest in the former cases, for in them it must lead to a feeling of perplexity and doubt, exactly opposed to those habits of thinking and reasoning, which are among the most useful results of physical researches. Thus the very first instance given is, 'A sling-cord is always tight while the stone is whirling, and its tension is of course the measure, both of the centripetal and centrifugal force:' a position perfectly true, but which ought by itself to have corrected the definition given, for assuredly no one who ever slung a stone could fancy that the tension of the string acted in the direction of the tangent, or in any direction except along the line of the string, and directly away from his hand. What then will be the condition of the learner who finds his definition and his very first example irreconcileable? What will be his notions of the certainty and accuracy of science?

Again in page 67, we are told that 'the earth has bulged out seventeen miles at the equator, in consequence of its daily rotation, and is flattened at the poles in a corresponding degree. A mass of lead that weighs one thousand pounds at our pole, weighs about five pounds less at the equator, by reason of the centrifugal force.' The centrifugal force, therefore, is stated at the two-hundredth part of the centripetal. If the centrifugal force be the inertia of the body tending to move straight onward, it must increase in the same ratio as the velocity; and a learner, with any disposition to draw conclusions for himself, would probably make the observation, that the velocity of the earth's rotation would require to be increased two hundred fold, before the centrifugal became equal to the centripetal force, and he would draw a correct conclusion from the information given him. But what will

he find in the same page? ‘If the rotation of our earth were *seventeen* times faster than it is, the bodies or matter at the equator would have centrifugal force equal to their gravity.’ The confusion would seem irremediable, and the last cause to which the student would refer it, would probably be the incorrectness of his definition. Suppose, however, the definition to be amended: he will still, without the assistance of some portion of what Dr. Arnott calls technical mathematics, be unable to see the correct correspondence of the different results, for it is only by their assistance that he can ascertain that the centrifugal force in the same circle varies as the *square* of the velocity. It may indeed be stated as a fact, that the centrifugal force does vary in this ratio, and the conclusion in question (with some modification depending on the shape of the earth) will follow; but then an important deduction of reasoning is made matter of assertion or definition, and the philosophy which requires this assistance, can hardly be said to be ‘sufficient for the explanation of all the great laws of nature.’

The continuation of the passage last quoted affords more matter for observation. ‘If the rotation of our earth were seventeen times faster than it is, the bodies or matter at the equator would have centrifugal force equal to their gravity, and a little more velocity would cause them to fly off altogether, or to rise and form a ring round the earth like that which surrounds Saturn. Saturn’s double ring seems to have been formed in this way, and is now supported chiefly by the centrifugal force of the parts. Were it to crumble to pieces, the pieces might still revolve, as so many little satellites. His true satellites are only more distant masses sustained in the same manner.’ The first objection which here occurs, is the vagueness of the expression ‘fly off altogether,’ by which it would probably be understood that the bodies would quit the surface of the earth and never return to it; while the fact is, that they would at the time absolutely quit the surface of the earth, and revolve in an elliptical orbit, passing in each revolution through the spot where they had first quitted it, which would be the nearer extremity or perigee of the major axis of the orbit. But would they rise and form a ring like Saturn’s? or what reason is there for supposing that Saturn’s ring was so formed? and to what extent is it true that, were it to crumble to pieces, the pieces might still revolve, as so many little satellites? We have already mentioned, that each particle of matter thus detaching itself from the surface of the earth would revolve in an elliptical orbit, the centre of the earth being in the focus. Every particle in the ring of Saturn moves in a circle round the centre of that planet. It may

not be impossible that the particles thus detached might continue within the influence of each other's attraction ; that they might unite, or, if all detached at once from the planet, that they would never have separated from each other ; and if the tendency of each to move in the elliptical orbit, which by itself it would have described, be less than its disposition to adhere to the particles in contact with it, they might modify and alter each other's motion, and produce the result suggested. But is this the history of the formation of Saturn's ring ? The motion of rotation of any heavenly body appears to be unsusceptible of any change : if therefore Saturn's ring had been so formed, the rate of motion of the remaining part of his body would still show at least the possibility of such a result having taken place. If the rate of Saturn's rotation had thrown off all the matter of which the planet was originally composed, and which extended beyond a certain distance from his axis, the remaining part would be all that which was within the necessary distance ; and the equator of Saturn would now revolve with the velocity which just rendered the centripetal and centrifugal forces equal, or with the velocity of a satellite moving in a circular orbit close to the surface of the planet. The time of rotation of the planet would therefore be the periodic time of a satellite so revolving. Now this periodic time may be at once deduced from that of any of the actual satellites of Saturn : and it will be found to be less than four hours and twelve minutes : the actual time of rotation of Saturn is about ten hours and sixteen minutes : and the centrifugal force at his equator, therefore, only about one-sixth part of the centripetal.

Again, the period of rotation of Saturn's ring is equal to the periodic time of a satellite revolving round the planet at the mean distance of the ring. A particle of matter, therefore, situated in the ring at its mean distance from the planet, would have its centrifugal and centripetal force accurately balancing each other, and the annulus formed of the particles at this distance would, independently of any cohesion between its particles, continue, by the accurate proportion between the forces acting upon it, to perform its present revolutions, and if it 'crumbled to pieces,' each particular action would continue to move in its present course as a satellite. But for every particle situated within this annulus, the centripetal force is greater, the centrifugal less than those which constitute this exact equality : and for every particle without it, the centripetal force is diminished, and the centrifugal increased. All the former particles, therefore, would tend, by reason of the inequality between the forces, to approach the

planet, all the latter to recede from it : and the ring, were it not for the mutual attraction of its own particles, would, with the exception of the annulus at its mean distance, not be supported, but dissolved, by the action of the centripetal and centrifugal forces. It is indeed true that, were it to crumble to pieces, the pieces would revolve as so many little satellites ; but not in the path of their present rotation, or in any circular orbits : any one within the mean distance of the ring would revolve in an elliptic orbit interior to the remaining annulus, and having the position of the body at the time of its detachment from the ring for the remoter extremity of its major axis : and similarly, any one beyond the mean distance of the ring would revolve in an elliptic orbit exterior to the remaining annulus, and having the position of the body at the time of its detachment for the nearer extremity of its major axis. What the effects of the mutual attractions and interferences of these numerous bodies would be, we need not consider : enough has been already said to show how far Dr. Arnott's statement is from truly representing all the circumstances of the case, and to show the danger of passing too easily from general statements to particular conclusions.

In these cases the wrong description of the word centrifugal force has led to erroneous conclusions : in other instances, in the passages to which we have referred, the results deduced are correct, but they are not the consequences of centrifugal force in any correct acceptation of the term. Thus we are told that ' it is owing to the centrifugal force in any bending part of a stream of water, that is to say, to the tendency away from the centre of the curvature, that when a bend has once commenced, it increases, and is soon followed by others, until that complete serpentine winding is produced which characterizes most rivers in their course across extended plains. The water being thrown by any cause to the left side, for instance, wears that into a curve or elbow, and, by its centrifugal force, acts constantly on the outside of the bend, until rocks or higher land resist the gradual progress : from this limit being thrown back again, it wears a similar bend to the right hand, and after that another to the left, and so on.' The explanation is correct, but it evidently depends not on the centrifugal force, as we have defined it, but on the force which Dr. Arnott speaks of as centrifugal, namely, the inertia with which the water tends, at every point of its course, to preserve the straight line in the direction of which it is at that instant moving. The introduction of the centre of curvature, or of any point with reference to which we estimate the centrifugal force, as ' a tendency away from ' that centre,

is idle and superfluous ; and a learner might find some difficulty in discovering what this imaginary point was, or he might be in some danger of ascribing to it some sort of material existence which it does not possess. The truth is, that centrifugal force, in its correct acceptation, has no meaning, or at least no importance, except when considered with reference and in opposition to centripetal force. Where, as in the case of gravitation, there is a distinct force tending towards a particular point, which, therefore, becomes a natural and necessary *centre* to which to refer its operation, it is important to know what antagonist forces neutralize or modify its action. The approach of the attracted body to the centre of force, or its recession from it, depends merely on the relation existing between the centripetal force and that portion of the effect of inertia which acts in opposition to it : and as it is of the utmost importance to determine this approach or recession, we therefore seek to decompose the whole effect of inertia, and estimate in what manner, and to what amount, it directly resists the centripetal, or, in other words, produces a centrifugal force. Where, on the other hand, there is no force tending towards a real centre, there is generally no object in estimating the effect of inertia with reference to one arbitrarily chosen. In these cases the whole effect of inertia is generally what we have to consider : thus the effect of a running stream is produced by the whole action of the water in the direction of its motion, and though the particular circumstances under which it acts may give this motion a curved direction, it is the whole motion with which we are concerned ; and it is only introducing an unnecessary and embarrassing element into the consideration if we chuse in any way to refer it to some point which exercises no influence over it, and is merely suggested by the form accidentally assumed by the current.

The confusion which must result from the failure to distinguish between these different modes of considering and estimating the effects of inertia is sufficiently plain, and it must be very injurious, especially in an elementary work. Still it does not hinder the passage, on which we have so long been commenting, from furnishing many valuable and interesting examples ; and, as they are generally explained with much clearness, the effect, in the particular instance, is referred to its true cause, and the illustrations are but little affected by the error or ambiguity of the original position. In one instance, however, Dr. Arnott seems to have been himself led into error ; and as he takes considerable credit to himself for the theory of the standing *still*, or *sleeping*, as it is called, of

a spinning top, and speaks rather slightly of other treatises as failing to explain it, it may be worth while to suggest the following considerations :—

1. If a top spin about its principal axis (friction, atmospheric resistance, &c., being excluded), that axis will never change its inclination to the direction of gravity.

2. The rising must, therefore, depend on friction or some other force.

3. Therefore an explanation of the phenomenon, which does not mention any force but gravity, must be absurd.—See Whewell's *Dynamics*, p. 340.

The same summary mode of coming to a conclusion, which in this case seems to have satisfied Dr. Arnott too easily of the correctness of his own deductions, may probably account for an undue readiness, in some cases, to speak slightly of those of other persons; for example, of Mr. Perkins. To the experiments of this gentleman we are largely indebted for our knowledge of heat; and his steam-engines, although unfortunately originally brought forward before his theory was sufficiently perfected to give them the fairest chance of success, have at least answered the expectations of their constructor too well to be summarily dismissed as failures either in theory or practice; if, indeed, they have not absolutely succeeded in establishing the soundness of the principles on which they were constructed. Dr. Arnott, however, speaks thus :—

‘ From misapprehension of the law of increase of force by increase of heat in water some exceedingly false conclusions have been drawn, and acted upon at great expense,—as lately by Mr. Perkins, in attempts to make engines work with an excessively high pressure. Besides making the error now alluded to and others, Mr. Perkins also overlooked the fact, that we possess no material for cylinders and pistons strong enough to bear the contemplated pressure and friction even for a moderate time. Perhaps more striking examples could not be adduced of the absurdities into which even highly ingenious men may fall, when ignorant of those general truths of nature on which all branches of art are founded, than in the history of supposed inventions and improvements connected with the steam-engine.’—p. 382.

Another of Mr. Perkins's inventions is treated with severity of a different kind. After describing the construction of the steam-gun, Dr. Arnott says,

‘ The rapid succession (of bullets) resembles the issues of water from a jet pipe; and if such an engine could be used in a field of battle, its barrel of death, made to point gradually along a line of men, would mow them down like corn-stalks before the scythe—none could escape. *The horrible idea and proposal have been*

excused by saying, that to prove the possibility of such carnage must have the effect of putting an end to war altogether.'—p. 386.

Surely it is too late now to affect expressions of horror at any contrivance to render more formidable the means of warfare, and especially those which render the art of defence equal to that of attack, which confine themselves to the destruction of hostile forces, and are so within the control of their employers as never to endanger the peaceable and unoffending inhabitants of a country. All history proves that improvement in the art and mechanism of war has been accompanied by a mitigation of its ferocity, and even a diminution of its bloodshed ; and it is the mere affectation or thoughtlessness of humanity to close the eyes against uniform experience, and then to profess disgust at any new discoveries to which only this voluntary blindness can attribute effects different from those hitherto resulting from analogous inventions.

We must pass rapidly over much that follows, referring only to the account given in page 72 and the following pages, of the composition of forces as popularly and well explained in general, but furnishing many instances in which a defect in strict accuracy of statement produces the same sort of mischief, even where the passage is in the main correct, which we have already seen to result in other cases from actual error. We would particularly refer to the following passages :

' A body suspended, as a plummet, or falling to the earth, as an apple does from a tree, is always in a line towards the centre of the earth ; for while the part of the earth immediately under the body is pulling it straight down to the centre, the action of parts on any one side of the perpendicular is exactly counterbalanced by the action of corresponding parts on the opposite side, &c.'

A position very nearly correct, though the direction is not accurately towards the centre of the earth, but which depends for its truth on the figure of the earth, which is not mentioned as any element in the demonstration. Again,

' If a line be given representing a single force, or result of forces, as $b\alpha$, and if it be desired to know how much force there is in the resultant capable of acting in another direction, as bc , and in another as bd ; it is only necessary to draw lines in these directions from the commencement of $b\alpha$, and to cut such other lines by others drawn directly upon them, or at right angles to them, as it is termed, from the other end ; the lengths of bc and bd so cut off show the proportions required.'

The figure by which the passage is illustrated, places the lines bc , bd , at right angles to each other ; but it is evi-

dent that this is no condition of the problem, and the directions given for the determination of the lines cut off are therefore incorrect. Whether the error proceeds from referring merely to the particular instance, or whether it was intended to advert to the advantages of decomposing a force in the direction of two rectangular co-ordinates, (which, however, is nowhere directly stated,) it is not material to inquire.

These may be thought minute observations, but they illustrate very clearly the nature of the inaccuracies we complain of. In the instances already adduced they will sufficiently show the kind of error into which the reader is frequently betrayed, and a careful perusal will find too many other cases of the same kind. We shall confine ourselves in our remaining remarks to a few passages in which either the importance of the subject, or the amount of inaccuracy involved, makes it peculiarly desirable that the error should be pointed out.

The first of these is the description of the pendulum. Dr. Arnott appears here to have felt the difficulty of treating the subject without regular mathematical discussion, and it is due to him to say, that he has, nevertheless, explained much, very clearly, without it. The only material failure seems to be in the exhibition of the manner in which the length of a pendulum influences the time of its vibration :—

‘ Long pendulums vibrate more slowly than short ones, because, in corresponding axes or paths, the bob or ball of the long pendulum has a greater journey to perform, without having a steeper line of descent. If one pendulum be twice as long as another, it has twice as much to fall in its descending arc, while in corresponding parts of the two paths, the slope or inclination is always equal—the ball of the long pendulum may be considered as having rolled twice as far *down a given slope* as the ball of the short pendulum. Now, as a body falls four times as far either directly, or on any uniform slope, in two seconds as in one, a pendulum must be four times as long to beat once in two seconds, as to beat every second.

—p. 87.

The argument clearly depends entirely on reducing the use of a pendulum to the known case of a body falling down an uniform slope, and the passage referred to does not pretend to deal with any other case; but it is obvious that this is widely different from the case of a pendulum, where the rate of inclination varies at every consecutive point, and the manner in which the result is produced can only be understood by actual proof and minute discussion. The fault of the passage is not so much that it fails to

explain the result, as that it professes to do so; for no learner can read it, and suppose it satisfactory, without habituating his mind to acquiesce in doubt and confusion.

There are few notions connected with mechanical sciences so important as that of the centre of gravity, and the ascertainment of its existence, therefore, demands the most careful consideration. It is by no means an obvious truth that such a point always exists. How then is it to be found? Dr. Arnott has taken a very short course:—

‘ If any uniform beam or rod be supported by its middle, like a weighing beam, the two ends will just balance each other If equal weights be afterwards be attached in corresponding situations on the two arms of the beam, the balance will not be thereby disturbed; and the operation of adding weights that counterpoise, above and below, and near and far from the centre, may be continued until a bulky mass is built up upon the beam; or, instead of a beam, a wheel may be used, yet the whole will remain perfectly supported, and in equilibrium about the original centre. Now, in every body, or mass, or system of connected masses, in the universe, there is a point of this kind about which all the parts balance or have equilibrium, and it is this point which is called the centre of gravity or of inertia. This centre in a mass of regular shape and of uniform substance, as in a ball or cube of metal, is easily found, because it is the apparent centre of the form; but in bodies that are irregular, either as to density or form, it must be found by rules of calculation, hereafter explained.’—p. 117, 118.

Perhaps we should be wrong in supposing that the early part of this passage is meant to do more than *illustrate* the notion of the centre of gravity, and the existence of such a point generally may be left to depend on the mere assertion of the author. If it be so, it furnishes strong testimony of the insufficiency of the mode adopted to give any thing like complete information, and it is also to be regretted that the reader is not more expressly apprised that the introductory part is *illustration*, and not *proof*. If, on the other hand, it is intended that the reader should consider the passage to *establish* the existence of such a point, it can hardly be necessary to call attention to its complete insufficiency, declaring the fact, as it does, only from the symmetrical arrangement of particles round a point in particular cases, and thence assuming its existence in the only cases of difficulty, namely, those in which the particles are not symmetrically arranged.

The only remaining passage on which we shall make any detailed remarks, is one to which we attach considerable importance, not so much on account of the interest which belongs to the class of speculations with which it is con-

nected, as on account of the bad example which it sets of a loose and careless habit of acquiescing in plausible arguments, without sufficiently examining either into their soundness, or into their correspondence with the facts in question. ‘Strength,’ we are correctly told in page 193, ‘depends on the magnitude, form, and position of bodies, as well as on the degree of cohesion in the material. Of similar bodies the largest is proportionably the weakest.’ These positions are illustrated by experiments on the different lengths of projecting bodies, in proportion to their breadth and depth, which are supported by the cohesion of their particles, or the different weights which they will support: and the conclusion is deduced, that any such mass may be made to project so far as to be broken off by its own weight; and that this will also be the case if it be supported at both ends, or, indeed, however supported, and of whatever shape. With one qualification, namely, that there must be some part of the body unsupported, for it is the weight of the unsupported part which produces these phenomena of fracture, this deduction is correct; our objection is to its application.

‘Beyond a certain limit no proportions whatever will keep a body together in opposition merely to the force of its own weight. This great truth limits the size and modifies the shape of most productions of nature and art—of hills, trees, animals, architectural or mechanical structures, &c.

‘*Hills.*—Very strong or cohesive material may constitute hills of sublime elevation, with very projecting cliffs and very lofty perpendicular precipices, and such accordingly are seen where the hard granite protrudes from the bowels of the earth, as in the Andes of America, the Alps of Europe, the Himalayas of Asia, and the Mountains of the Moon in Central Africa. But material of inferior strength exhibits more humble rising and more rounded surfaces. The gradation is so striking and constant from granite mountains, down to those of chalk, or gravel, or sand, that the geologist can generally tell the substance of which a hill is composed by observing the peculiarities of its shape. Even in granite itself, which is the strongest of rocks, there is a limit to height and projection; and if an instance of either, much more remarkable than now remains on earth, were by any chance to be produced again, the law which we are considering would prune the monstrosity.’—p. 194-5.

There are many other applications of the same argument to the cases of vegetables, animals, &c., which it is not necessary to extract. It should, however, be mentioned, that in some of them the impossibility of any very great increase of magnitude is ascribed to the danger of *crushing* the material of which the things in question are composed, and to that only.

Now, in the first place, the experiments on projecting bodies, on which alone the argument is founded by the author, have nothing to do with the question of *crushing*. The rate in which the danger increases is itself different, for Dr. Arnott shows, that the forces which tend to produce fracture increase more rapidly than the dimensions of the body; while the force which produces crushing is weight alone, and increases merely in the same proportion as the column pressing upon any particular point. The instances given, therefore, which are stated to depend on crushing, may be correct in themselves, but they refer to a different principle from that to which 'the great truth which limits the size of most productions of nature and art' is ascribed.

But, besides this, although the projection and overhanging of rocks will be limited in the manner suggested, the height of mountains will be quite independent of it. It may, indeed, be modified by the danger of *crushing*, and to this Dr. Arnott may refer, when he says, in p. 195, 'In the moon, where the weight or gravity of bodies is less than on earth, on account of her smaller size, mountains might be many times higher than on earth; and observation proves that the lunar mountains are in fact very high.' The danger of crushing would, of course, diminish with the diminution of gravity. But, except from this cause, no elevation could endanger the stability of a mountain which did not overhang, unless it was so great as to make the centrifugal force at its summit superior to the centripetal: and it certainly is not to such imaginary cases as this that the passages in question can refer.

But independently of these considerations, which may seem rather to affect the strict accuracy of the statement than the general truth of the explanation, how do the facts stand? Is it the danger either of crushing or of breaking off the projecting portions of a mountain, which principally determines its height and shape? and does the height so correspond to the strength of the material, as by itself to furnish any valuable information with respect to the constitution of the mountain?

On the latter question it may be sufficient to refer to the great variety of elevations assumed by the same substance in different places; to contrast, for instance, the little elevation of the small granitic portions of England, not merely with the great heights which granite attains elsewhere, but with the loftier ridges of other rocks in their immediate neighbourhood: and to advert to the fact that many considerable mountains consist of a variety of strata, some harder and

some softer, and that all these would have to be taken into account, even upon Dr. Arnott's own principle, before the constitution of the mountain could be ascertained from its elevation only. We may also remark, that in the Alps, limestone is found in very high positions, and in steep, abrupt faces: the granite is the highest, but the limestone is, in some cases, at an elevation nearly as great. In opposition to the Doctor's theory it may be added also, that serpentine, one of the most tenacious of rocks, is never found to form mountains or high hills.

Again, the general proposition may be true, though it is not to be received without large allowance for overstatement, that 'material of inferior strength exhibits more humble risings and more rounded surfaces.' But in ascribing this effect to the quality of the material, is the danger of crushing, or breaking off, to be the only, or even the principal thing attended to? There are very few ways in which the latter is likely to happen; the most obvious are where a mountain originally overhung, or where, either by the undermining or crumbling away of some soft inferior stratum, or by the alteration of the position of the whole mass by some violent convulsions, part, originally supported by matter under it, is left to depend on its own cohesion for its stability. Even of these possible causes the two latter are not even suggested. But it will be in a very small number of instances comparatively, that the effect of softness and structure, evident as it may be in its results, is thus to be explained: and that knowledge is not only imperfect but erroneous, which, in attributing observed appearances to such causes, neglects to trace their operation under the different circumstances to which the materials appear to have been exposed. The hardness or softness, the brittleness or toughness, of different earths or rocks, their liability to the action of heat, of moisture, or of air, their crystalline or other character, their disposition in strata, or in more irregular masses, are all circumstances which, under the various changes to which they have been exposed, will produce a marked and traceable effect. The action, indeed, either of the earthquake or of the deluge, the dislocations produced either by elevation or depression, will generally act with most power on the substances of weaker consistence: but this does not render it the less necessary to point out the forces to which the surface of the earth appears to have been exposed, and to trace the manner in which it has been modified, (even where this is correctly referred to the character of the rocks of which it consists,) to the causes which have really enabled that character to pro-

duce the effects explained. Without this, the reader is not merely permitted, but he is led to believe that the whole result is produced in a manner which really is of rare and partial occurrence: and looking to the work of Dr. Arnott as one devoted to education, in which point of view alone it falls within our scope to consider it, we know no tendency more mischievous than that which such reasonings possess. They accustom the mind to acquiesce in an imperfect knowledge, and to assume, because a particular fact will plausibly account for some appearances, that it need look no farther, but may rely on that one fact as the occasion of all it sees.

We must again advert to the circumstance, that the fullest developement of scientific subjects which can be given in such a work as Dr. Arnott's, is, after all, a very imperfect one; and this makes the mischief of such inaccuracies as we have pointed out greater than it would be in a more regular treatise, because the reader is less capable of detecting the error into which he may be led. He is not furnished with the means of absolute demonstration; he ought therefore to be disciplined into caution. With this observation we conclude. It would have been more agreeable to direct attention principally to the various merits of the work as addressed to the largest proportion of readers, instead of pointing out errors. We have already mentioned the general nature of these excellencies; but we ought not to omit all mention of the very interesting medical and anatomical illustrations which form a principal department of the work, and which might perhaps entitle it to notice as a treatise of professional education. It is, however, as a work of general circulation, that it is of most importance: and it is because its merits and popularity, and the pretensions which it advances to set the fashion of a new style and order of education, render any error in its fundamental principles of extensive danger, that we have thought it material to subject it to somewhat minute, and it may seem, severe examination. The mischief of any such error, in any branch of elementary instruction, is great; but it is greatest if it affect those subjects to which recourse is commonly had to correct any vague or loose habits of mind, which may have been allowed to grow up during the acquirement of other branches of knowledge.

GEOGRAPHY OF ANCIENT ASIA.

Two Essays on the Geography of Ancient Asia, intended partly to illustrate the Campaigns of Alexander, and the Anabasis of Xenophon. By the Rev. John Williams, Vicar of Lampeter, and Rector of the Edinburgh Academy.

THESE two essays of Mr. Williams, being designed to effect a complete revolution in our geographical systems of ancient Asia, deserve some examination. The Edinburgh Review has already given its sanction to Mr. Williams's new system; and we perceive that, on one most important point, the site of Ecbatana, a learned German* has adopted, perhaps without inquiry, the same conclusions as the English critic.

The main design of the first essay is to demonstrate that Ispahan is on or near the site of Ecbatana, the ancient capital of Media. It is well known to those who are conversant with the ancient geography of Asia that three different positions have been assigned as the site of the Median Ecbatana—Tabriz, Hamadan, and Ispahan. The claims of the first town are now entirely set aside; and indeed no person who had the most superficial knowledge of Asiatic geography could for a moment have advanced such an hypothesis. Hamadan and Ispahan are at present the two rivals, and the latter has won the favour of Mr. Williams. The 'Geographical Memoir of Ecbatana' contains so much that is really foreign from the question, that we should hardly know how to handle it, if Mr. W. had not himself prescribed the precise and true way of treating the subject. In p. 10. he remarks :

'In attempting to impress the Society (the Royal Society of Edinburgh) with the conviction that Ecbatana was either on the site, or in the immediate vicinity of Ispahan, my intention is to prove the truth of my own supposition, without alluding to previous theories, for the establishment of the truth necessarily includes the refutation of errors.'

In the same way, without examining the testimony of Diodorus and Arrian, or Mr. Williams's exposition of their geography, which we do not think positively decisive either way, we will put the question on the Itinerary of Isidore of Charax, and contend that, by this alone, Hamadan is proved to occupy the site of the Median Ecbatana. Mr. W. also has tested his theory by the Itinerary of Isidore, and at the conclusion of his examination of it he remarks (p. 65), 'on the whole, every candid reader will allow, that if Isidore's Itinerary does not (as far as it has been examined†)

* Mr. Lassen of Bonn, in his review of Bopp's Sanskrit Grammar. (Indische Bibliothek. 1830.)

† This is an important reservation—Mr. W. has not examined it.

terminate at Ispahan, there must be a greater number of accidental coincidences, than ever before occurred to confirm an error.' The question then between Hamadan and Ispahan may be fairly tried by this Itinerary.

The Itinerary of Isidore, entitled $\Sigma\tauαθμοὶ Παρθικοὶ$, is probably a fragment of a larger work. It begins at Zeugma (the modern *Bir*) on the Euphrates, and, taking the line of a commercial route, passes through Anatho on the Euphrates, Seleucia on the Tigris, Ecbatana, Rhagæ, the Caspiæ pylæ, and terminates at Alexandropolis in Arachosia. The Parthians, Isidore remarks, call Arachosia by the name of White India. The Itinerary between Zeugma and Seleucia has no connexion with the present question : the position of Seleucia also is well known (lat. $33^{\circ} 8'$, long. $44^{\circ} 38'$, on the Tigris, about twenty geographical miles below Bagdad) ; and we shall, therefore, with Mr. W., begin our examination from this point. The following is a translation of the Itinerary between Seleucia and Ecbatana.

' Next* to Seleucia commences the province of Apolloniatis, the route through which is thirty-three schoeni. It contains several villages, which serve as $\sigmaταθμοὶ$ (halting-places), and a great city, Artemita. The river Silla flows through the city, which is fifteen schoeni from Seleucia. Artemita is now called Chalasar.

' The next province is Chalonitis : the route through it, twenty-one schoeni. It contains five villages, halting-places ; and Chala, a Greek city, fifteen schoeni from the borders of Apolloniatis. Five schoeni further is the mountain range of Zagros, the boundary of Chalonitis and Media.

' Next comes Media, twenty-two schoeni. It begins with the district of Karina, which contains five villages, halting-places, but no city.

' Then Cambadene, thirty-one schoeni. The villages are five, being also halting-places or stations. There is one city called Baptana, on a mountain, where there is a figure ($\chiαλμα$) of Semiramis, and a pillar.

' Then Upper Media, thirty-eight schoeni. The city of Konkobar, with its temple of Artemis, is at the commencement of the province, three schoeni from the borders of Cambadene ; then Maziniaman, a custom-house, three schoeni further : then to Adragianas, a royal residence among the Batani ; which Tigranes the Armenian destroyed, four schoeni ; and thence to Apobatana, the capital of Media, where there is a treasury, and where they perpetually sacrifice to Anaitis, twelve schoeni. Beyond this are three villages, which are stations.'

* Hudson's Minor Geographers, vol. ii.

Apobatana is Isidore's name for Ecbatana, such changes being commonly enough made by Greek writers whenever they fancied a foreign word, or part of a foreign word, to contain something like a Greek root. Mr. W. also contends that Apobatana and Ecbatana are the same place, a fact of which we shall soon have no doubt when we come to a more particular examination of the *Itinerary*. Mr. W. then proceeds to deduce the value of the schoenus, which he says he has no doubt is the same as the royal parasang of ancient Persia. Following the line of the *Itinerary* he computes the distance on the map between the Zeugma of Isidore and Seleuceia on the Tigris to be five hundred and sixty-five miles (geographical or English he does not say); he then divides this result by one hundred and seventy-four, the number of schoeni between Zeugma and Seleuceia, and finds that 'three miles and a quarter on the map answer almost to a nicety to the schoenus of Isidore.'—Again :

'The total of the distance between Seleuceia and Apobatana amounts to one hundred and twenty-nine schoeni; which, reduced to the above rate, give four hundred and twenty miles within a fraction. The distance between Seleuceia and Ispahan on the map is four hundred and twenty-four miles,—a coincidence for which nothing, except a very close approximation to the truth, can account.'

Let us see if we cannot account for this coincidence, without admitting Mr. W.'s conclusion. Mr. W. first of all deduces a value of the schoenus in miles by following the *track of the Itinerary* along the Euphrates, and by comparing this line of distance with the schoeni of Isidore. Now it is not worth while showing that we do not know the course of the river accurately enough to avoid an error of at least one hundred miles* in reckoning so long a distance; but this is a fact of small importance compared with the application which the author makes of the value of the schoenus thus discovered. Mr. W. puts one leg of his compasses on the ruins of Seleuceia, and whisking round the other with his radius of four hundred and twenty miles, he cuts through Ispahan, which, *therefore*, is Ecbatana. The only fault of this method is, that it goes on the supposition of the line of road between Seleuceia and Ispahan, when reduced to what

* Mr. W. seems, in another part of his book, to be of the same opinion; for, in p. 144, speaking of the distance between Thapsacus and Babylon, which is the greatest part of the line of Isidore's route, he has the following remark, in which we fully concur:—'As the road from Thapsacus to Babylon must have, in the desert, followed the course of the river in its various bendings, we can draw no certain conclusions until that part of the stream of the Euphrates be better mapped than it is at present.' And yet this very track, which in one part of his essay he considers to be unknown, he here considers to be perfectly well known.

he calls map distance, being *perfectly straight*, and having no bend or angle in it,—a supposition, however, quite sufficient to vitiate the result, if there were no other objection. In fact, this coincidence of the *road* distance and the *map* distance, proves that Ispahan is not Ecbatana*.

Mr. Williams adds, after this application of the compasses—

‘ There may, however, on examining the Itinerary in detail, such discrepancies be discovered which may, in a considerable degree, invalidate the general conclusion. This, therefore, must be obviated by a minute examination of the whole route.’

In examining the ancient Itineraries we are never sure that we are on the right line of road, unless we find occasionally some place that preserves its name, or some remarkable natural or artificial object to serve as a land-mark, and enable us to fill up the intervening spaces with probability. Distances are continually fallacious, for the causes of error are numerous: we must, therefore, look for other assistance. Now Mr. Williams, in examining the names which Isidore gives between Seleuceia and Ecbatana, (assumed to be Ispahan,) is not able to assign the position of one single place with the least show of probability. He can find no route that he can trust, and for a very good reason, the country possessing no inducement to travel through it. A passage of Strabo † misinterpreted, and a number of very vague conjectures, are all that we find, and for a more minute knowledge of them we refer those who wish to possess it to p. 61, &c. Mr. Williams, in the beginning of his essay, considers it a strong presumptive evidence in favour of Ispahan being on the site of Ecbatana, that nearly all the great cities of antiquity have their modern representatives some where in their neighbourhood. This is perfectly true, but applies with perhaps nearly equal truth to great lines of road. Now of all the roads that run from Bagdad (which, as we have remarked, is only about twenty geographical miles from Seleuceia) none is so well known as that through Kermanshaw to Hamadan. It has been the ordinary route of travellers from Bagdad to

* Let us reverse Mr. Williams's mode of proceeding: suppose that Ispahan is proved to be Ecbatana, the compass distance from Seleuceia is four hundred and twenty miles, corresponding to one hundred and twenty-nine schoeni; therefore 1 schoenus = $3\frac{1}{4}$ miles on the map. Now, suppose we want to find out where Bir is on the Euphrates; the distance in schoeni from Seleuceia is 174, which are equal to 365 miles. Fix one leg on Seleuceia, and cut the Euphrates with a radius of 365 miles (we are supposed to be ignorant of the *direction* of the route between the two extreme points, as in the case between Seleuceia and Ispahan), and we cut the Euphrates not at Bir, but at a point *more than three degrees* north of it.

† Lib. xvi. p. 744, Casaub. $\pi\varphi\delta\dot{\iota}\pi\dot{\iota}\omega\tau\dot{\iota}\pi\dot{\iota}\omega$ is translated ‘nearly direct east.’

Ispahan, or from Ispahan to Bagdad *, for a very long time up to the present day.

On this line of road, twenty † miles beyond Kermanshaw, we find the sculptured rocks of Besittoon, which we believe to represent the Baptana of Isidore, and the Bagistana (garden or park district) of Diodorus. Besittoon is about seventy miles from Hamadan ; but the distance of Baptana from Ecbatana cannot be deduced from Isidore, because he does not state in what part of Cambadene it is situated.

But it may be said, where is the pillar of Semiramis ? We must admit that Ker Porter could not find it, though Olivier describes it, and gives a picture of it ‡. Mr. Williams places Baptana, however, between Shuster and Ispahan, about two hundred and twenty geographical miles S.S.E. of our Baptana ; and then he adds—‘ I have no information to communicate on the subject of the intervening stations between Cambadene and Ecbatana.’ But the map which accompanies Mr. Williams’s essay has some very important information, which it is quite impossible to conceive how he could have overlooked. As we advance from Besittoon towards Hamadan, we find the ruins of the magnificent temple of Kungavar, distant from Hamadan about forty-five miles §. The Konkobar of Isidore and the Temple of Artemis are nineteen schoeni from Ecbatana. Whether the Kungavar of modern travellers and the Konkobar of Isidore are the same place, we leave to the judgment of our readers. If they believe them to be the same, the inference as to the site of Ecbatana is obvious. It is singular that Mr. Williams, who is acquainted both with Kinneir’s map and Memoir, and who has also inserted in his own map the positions of Besittoon and Kungavar, should have treated the former position so briefly, and not have mentioned the latter at all.

As to the value of the schoenus, if we compare the distances given between Hamadan and Kungavar, the nineteen schoeni of Isidore with the forty-five miles of Kinneir, we shall find the schoenus of Isidore (which we presume to be a road distance) equal to $2\frac{7}{9}$ English miles of road distance. This result may be very inexact, owing to inaccuracy in Isidore’s distance, or to corruption of the numbers in the Greek text, or to the inaccuracy of the modern estimate of the distance, or to all these causes combined. We have not

* See, for example, Tavernier’s Travels ; his route, in book iii., chap. 6., passes through Kungavar (*Κογκαρ*), leaving Hamadan on the north.

† We take the authority of Kinneir’s Memoir of the Persian Empire, p. 130, whose map Mr. Williams has referred to.

‡ Olivier, vol. iii., p. 23, but he refers it to the *era* of the Sassanidae.

§ See Ker Porter, vol. ii., p. 140. Kinneir, p. 129. Olivier, Thevenot, &c.

attempted, in this examination, to deduce the value of the schoenus from comparing modern routes between Hamadan and Bagdad with the Itinerary of Isidore, because we cannot find one which we can trust. We, therefore, leave undecided the question of the value of the schoenus, as its *precise* estimation is not necessary for deciding the site of Ecbatana.

We have already remarked that we consider it unnecessary to examine Arrian and Diodorus in order to decide the question. The evidence of the former will not decide the dispute; and that of the latter is generally to be suspected, when not confirmed by other authority. As far as Arrian and Diodorus have made any impression on us, it is in favour of Hamadan; and this may be considered as a sufficient reply (for this part of the subject) to Mr. Williams's conviction 'depending on moral grounds' (see p. 27) that Hamadan is not Ecbatana.

Before we dismiss the subject of Ecbatana, we must notice the curious and ingenious use which Mr. Williams has made of a quotation from Eratosthenes (found in Strabo, book ii.). Eratosthenes, as ordinary readers understand him, means to say that Thapsacus, Gaugamela, Arbela, *Ecbatana*, and the Caspiæ pylæ, lie pretty nearly in the same line of equal length of days, or, in other words, nearly in the same latitude. But Mr. Williams very dexterously contends that this is the *Assyrian Ecbatana*, a place, according to him, quite distinct from the Median capital. Strabo, whom Mr. Williams makes use of to prove that Artemita is nearly due east of Seleuceia, is discarded when he does not answer the purpose, and we are told (p. 67), that 'it may be doubted whether Strabo was acquainted with the true position of Ecbatana or not.' And yet we find Strabo quoted immediately after to prove the position of certain mountain tribes, whose abodes are rather more variable than the site of Ecbatana. We believe with Mr. Williams that Strabo did not well comprehend the geography of eastern Asia, and this may have arisen in part from his not having used any tabular construction by which he might rectify and test his description. This was the opinion of Major Rennell, and may, perhaps, explain in part the monstrous blunders to be found in the eastern geography of Strabo.

Mr. Williams has added a few remarks on the Syrian Ecbatana, where Cambyses died. Pliny informs us it was on Mount Carmel, which is as hard to believe, as when he tells us (Lib. iv. 7.) that the demus Thria was near Marathon. Mannert (*Geographie von Arabien, &c.* p. 277) suggests that the Ecbatana of Herodotus may be Bathyra, east of the Jordan, which is called Ecbatana in the Greek text of Josephus. The German geographer cannot imagine why

Cambyses should turn out of his way to Carmel, when he was hurrying to Susa to punish the usurper of his throne. Mr. Williams gives the following solution, p. 72 :

‘ Is it not difficult to conceive why Cambyses, summoned home-wards as he was by a most formidable and successful conspiracy, should have turned aside and have visited the heights of Mount Carmel, except on the supposition that the bigoted monarch wished to purify himself from the pollutions of the bestial gods of Egypt*, by offering sacrifices after the manner of his ancestors, at the Syrian Ecbatana ? ’

Let the reader decide for himself.

The second essay of Mr. Williams is on the geography of the Anabasis, a subject of considerable difficulty, and one in which certainty on some points is hardly attainable. After a careful examination of Mr. Williams’s essay, and Major Rennell’s ‘ Retreat of the Ten Thousand,’ we are of opinion, that the Major is, on all the important points, right, and that Mr. Williams is nearly always wrong.

It would be impossible to examine minutely, in so limited a space, all the points in which we differ from Mr. Williams, and therefore we must confine ourselves to a few. We will begin with the position of Thapsacus, which is generally placed at El Der : Mr. Williams places it opposite to Racca, and near the ‘ Surieh of Arrowsmith’s map,’ which is on the Euphrates, about sixty geographical miles in a straight line N. W. of El Der. Mr. Williams’s proof of the position of Thapsacus is, in one striking particular, like his proof about the site of Ecbatana. He wishes to show that there were *three* passages of the river by the name of Zeugma : one Zeugma Mr. Williams calls the Commagenian, and places at Samosata : a second, (which he considers to be the Zeugma of Ptolemy, Isidore, the Peutinger tables, and the Antonine Itinerary,) he places at Bir, and calls the Cyrrhestic ; and the third is the ancient Zeugma of Strabo, otherwise called Thapsacus. The passages in Strabo† distinctly show that he thought there were only *two* places called Zeugma ; and further, that neither of these is at Samosata, but that one is the old Zeugma or Thapsacus, and the other near the boundary of Commagene and Mesopotamia. One of the passages of Strabo referred to (p. 749), is thus translated and commented on by Mr. Williams (p. 129). The uppermost Zeugma, he remarks, was at Samosata, thus described by Strabo :

‘ Commagene is small, but has a strong city Samosata, in which was the royal palace. The country is now a Roman province.

* But Cambyses mocked the bestial gods of Egypt, and killed them.

† Strabo, p. 664. 747. 749. Casaub. Ed.

The territory around Samosata is small but very fertile. *There at present* is the Zeugma of the Euphrates.'

The words in italics are thus printed by Mr. Williams, as proving this Zeugma to be at Samosata; but we pray those, who will treat a Greek author fairly, to say if this passage can be tortured to mean anything beyond this, that the Zeugma is in Commagene. And this interpretation is the only one that will accord with the passages (p. 746, 747), where Strabo speaks of it as near the boundary between Commagene and Mesopotamia. We consider then that there is no difference between the Cyrrhestic Zeugma (Bir), and the Commagenian or Strabonian Zeugma (which Mr. Williams places at Samosata); we put them both at Bir. Mr. Williams, having settled his Zeugma at Samosata, proceeds to measure distances, a very dubious operation in a part of the world not well known, and a peculiarly unsuccessful one in his hands. Eratosthenes says*, that it is forty-eight hundred stad. from Babylon to Thapsacus, along the river; and two thousand more from Thapsacus to Zeugma. The distance given by Eratosthenes along the river from Babylon to Thapsacus Mr. Williams does not rely upon, because, as we have already remarked, he has no confidence in our maps of that part of the river. But for the line between Thapsacus and Zeugma, he *does* take the measurement of Eratosthenes; he also makes the distance on our maps between Surieh and Samosata to be one hundred and forty miles, (English we suppose); and then by estimating the stad. at the rate of fifteen to a mile, the distances agree wonderfully well. We make the same distance to be at least one hundred and fifty geographical miles, or about one hundred and seventy-five English miles. But how can such a difference arise? 'I regard,' says Mr. Williams, 'the elbow at Balis as infinitely exaggerated,' and accordingly, in his reckoning, he cuts it off. This is one of the numerous instances in these essays in which the author tells us that he has private reasons †, which he does not communicate, for knowing some very important facts.

We do not think that any careful geographer can admit Mr. Williams's mode of measurement, which is nothing more than making the distances fit the theory. But what must we say to the following extract, p. 144.

'We have before seen, that the Zeugma of Strabo was the bridge across the Euphrates at Samosata; but here he repeats his definition in order, as it were, to avoid ambiguity: the distance between the Zeugma in Commagene (where Mesopotamia commences) and Thapsacus † is two thousand stadia.'

* Strabo, p. 746.

† See p. 69, 208.

‡ Strabo, p. 746.

If Mr. Williams's theory of the *Zeugma* being at Samosata is true, and if Mesopotamia commences at the *Zeugma* of Strabo, as it really does, then Mesopotamia commences at Samosata, which certainly is not true, even according to Strabo.

The author has spent unnecessary labour in establishing Nicephorium on the site of Racca (which cannot be disputed), for the purpose of thereby proving * the site of Thapsacus to be opposite to it. We differ altogether with him on this point, and do not consider the position of Thapsacus to depend on that of Nicephorium. The author's reasons for asserting this connexion may be seen p. 132.

Among other things contained in these reasons, we cannot see how, according to the figures in the author's book, Thapsacus, which is on one side of the river, and in Ptolemy's longitude $73^{\circ} 10'$, can be said to be opposite to Nicephorium, which is on the other side and in longitude $75^{\circ} 5'$. Possibly these may be typographical errors. Also, we cannot comprehend the following remark—‘it may be etymologically inferred, that, as the Macedonian Amphipolis occupied both banks of the river Strymon, Thapsacus, on which they conferred the same name, had also a city on the opposite banks of the Euphrates to face it.’ If the Macedonian Amphipolis had been on both sides of the river, which it was not, the comparison would have been more apt.

There are difficulties about the site of Thapsacus, which we do not pretend to be able to remove†; but it seems more probable that Thapsacus is at El Der than opposite Racca, at least till better reasons can be given for Racca than Mr. Williams has yet found. We cannot conclude this tedious, but not uninteresting subject to scholars, better than in the author's own words: ‘I fear that my readers will feel as wearied of the names of Thapsacus and Racca as I feel myself; but they must remember, that, had the proof been very direct and easy, it would not have remained so long unknown.’

Our labour would be endless were we to follow Mr. Williams and the retreating Greeks through all the difficulties of their route, and the still greater difficulties of the numerous citations which the author has collected. There is a short dissertation on the site of Opis, a town which the Greeks passed by in their retreat, and the author, at the close of his

* The principal argument is, that the epitomizer of Strabo makes the distance of Nicephorium and Thapsacus one hundred stadia. We leave this assertion to have its full weight, which is about as much as that of the passage in Strabo, where, by some odd blunder, Thapsacus is said to be seven stadia from the Mediterranean.

† See Xenophon, *Anabasis*, i. 4. 18, 19. 5, 1. Rennell's *Anabasis*, p. 60.

remarks, 'assumes it as a fact, that the Opis of Xenophon was about seven miles above the Koote of the map. It is from this spot that I commence the return of the Greeks up the river.' This is the most startling assumption in the whole book, and only equalled by the importance of the results which flow from it. Between the point where Major Rennell makes the Greeks cross the river on their retreat northward, and the assumed point of our author, there are no less than eighty geographical miles in a straight line; the assumed point of Mr. Williams, of course, is the more southerly. It would be rather curious, if there were nothing on the line of route, which should decide between two such conflicting theories. We believe, however, there is ample evidence of Mr. Williams being wrong. But those who wish to understand the question well must study it, and neither take the assertions of Mr. Williams on credit, nor our own, which are necessarily less supported by proof, owing to the narrow limits within which the nature of a periodical publication confines us. Major Rennell considers that among other proofs of his map construction being right, we now find a *Zab*, which corresponds to the *Zabatas* or *Zapatas* of Xenophon; and we also find, on the west bank of the Tigris, a *Senn*, the probable representative of the *Kaiwai* of Xenophon*. Of *Kaiwai* the author remarks: 'nothing more is known of it'; and he adds, the *v* of Xenophon may have been a *x*, in which case 'it might have been' Coché. This is quite true, and by altering some more letters, it might be made like any other word you choose. Coché itself (*Kωχὴ*) is a well known place, close to Seleuccia on the Tigris, and within one day's march of the Diala (Mr. Williams's *Zabatas*). But Xenophon makes *Kaiwai* (Anab. ii. 4, 28) more than three days' march from the *Zabatas* (whatever may be the real modern name of that river is unimportant for the present purpose); and consequently the author's measurements and etymological conjectures are quite at variance.

In p. 196, the author, like some kind people when they have bad news to announce, prepares us to receive with resignation his new theory about the *Zab* :—

'Before I proceed, it is only a prudent step to conciliate the reader, who, although in a slight degree prepared for some innovations on received ideas, may yet be shocked at the suggestion that the *Zates*† of Xenophon is represented by the Diala, and not by the universally

* That the Greek *x* is often the representative of a Persian and Sanskrit soft *s*, is well known to philologists.

† The author lays some stress on the MS. reading in III. 3, 6 being *zāτην* as it really is; but a comparison with II. 5, 1, shows that *zετάτην* is the true reading.

received Greater Zab. Nor can I do this more effectually than by showing, not from my own measures and calculations, but from physical causes, that the Greater Zab could not have been the Zates.'

We are indeed shocked at it very much, and would as soon believe the author if he wrote Mississippi instead of Diala. Mr. Williams's objection is briefly this: the Zab, he asserts, is a river very dangerous to pass, and as Xenophon says nothing of the difficulty of crossing the Zapatas, it is certain that the Zab is not the Zapatas of the *Anabasis*. Those who have leisure, and are fond of assertions without proof, may read a little further (p. 197). Mr. Williams quotes Rauwolf to prove the river was not very easy to ford in January, 'when,' as Mr. Williams says, 'the streams of Mount Taurus are at a low ebb.' But the streams of Mount Taurus are certainly at a lower ebb in autumn when the Greeks crossed the Zab than in January; and a mountain river like the Zab, one full mile broad, as Rauwolf describes it, where he crossed, is not so formidable an obstacle as many other streams one hundred yards wide. Again—Niebuhr's account is given, who crossed it 'when the spring swell was commencing,' in the month of March, and found it dangerous and difficult. All mountain rivers are dangerous after heavy rains, such as occurred before Niebuhr crossed the Zab, and such as had rendered even the passage of the Little Zab very formidable to him. But Mr. Williams should have added something else that Niebuhr says about the Great Zab (vol. ii. p. 344. Copenhagen Ed.). 'I was told that this river, when it has not rained for a long time, and at the season of the year when the snow on the neighbouring mountains does not melt, is so shallow, that a man on horseback can ride across without any danger at all.'

Between the Zabatas of Major Rennell and that of Mr. Williams, the distance is one hundred and sixty geographical miles in a straight line. By this we see that our author is very much in the rear, and has a fair chance of being lost. But what will be the end of all this? Surely we must soon find some point of difference that will decide the question one way or another. All who have read the *Anabasis* recollect well that the Greeks, after crossing the Zapatas, still followed the course of the river till they came to a place where they could go no further; before them was a deep unfordable river; and on their right a mighty mountain barrier, through which the river appeared to force its way, absolutely prevented their march along its banks. It is now well known that at this point (about 37° north lat.) the Tigris for miles makes its way through the great Carduchian chain,

leaving on its banks, in many cases, scarcely a narrow foot-passage. Such phenomena on a grand scale are well known to exist in various parts of the old and new world. But Mr. Williams contrives to shut the Greeks in 'a natural cul de sac,' formed by the Hamrun hills and the Tigris, about lat. 35° ; thus the difference between the position that Major Rennell and Mr. Williams assign to the same point is about one hundred and fifty geographical miles, measured in a straight line along the river. Those who can believe that the Hamrun hills are 'exceedingly high mountains,' may also believe that they are the barrier that opposed the retreating Greeks.

The remainder of the route our author acknowledges to be exceedingly difficult to explain, as indeed it really is; but the difficulties are much increased by his new geographical system. We will not undertake to show the reader how Mr. Williams leads the army to Trapezus (lat. 41°) on the Black Sea, with such formidable obstacles to encounter, after having already suffered so much, and having advanced no further than the Hamrun hills (lat. 35°). We request him to read for himself. Two things in this new route require mention: first, our author takes the Greeks east of the Lake Van, while Major Rennell, whom we trust in, because he always gives us good reason, makes them go on the west side. Secondly, the army, it must be recollectcd, came to a river called the Phasis*, which Major Rennell considers to be a branch of the Araxes, which gives name to the district of Pasen, and is still called Phaz by the people of the country. Mr. Williams would 'willingly identify it with one of the streams that fall into the Lake Van'; and further he says, 'two other streams of the same name, the Colchian river and the Hy-Phasis run like this from the east to west, and perhaps derive their name from *pasi* or *fesa*, the oriental name for the east.' In what oriental language,—for there are a great many,—does *pasi* signify the east? In none, at least, that are known to oriental scholars. But such vague conjectures as this, wrapped up in a specious dress, form a large part of Mr. Williams's new geographical system.

The army at last arrives at Trebizond by a miracle, and there we would gladly leave them and the author, if the discussion on the site of Kerasus did not require a short notice.

Xenophon allows only three days march from Trapezus to Kerasus, while, in fact, it is nearer six marches, (being at least sixty geographical miles in a straight line,) provided the modern Kerasunt be the representative of Kerasus. But

* 1 Anab. iv, 6, 4.

Mr. Williams denies this. The resemblance or identity of the names Kerasus (gen. Kerasuntis), and Kerasunt, is a strong presumption in favour of their being the same place, which is confirmed by the distances given in the *Periplus* of Arrian. But if this is true, Xenophon has made a mistake in the distance between Trapezus and Kerasus. Mr. Williams, to prove that he has not made this mistake, labours to show that Arrian, who says that Pharnaceia 'was of old Kerasus,' only said so to please the people of Pharnaceia and the Emperor Adrian. 'Kerasus,' he adds (from private information, we presume), 'was one of the cities that formed the Pontic Tripolis (the modern Tirabili), and its name was lost.' But it appears again in Ammianus and the *Synecdemus*, as our author admits; yet we are told, this was not the real Kerasus, but the Pharnaceia which Arrian christened by that name. Those who are determined to defend all that Xenophon writes, and all that his text now contains, may adopt the author's solution of the difficulty. Though we believe the modern Cerasunt to represent Xenophon's town, we admit that there is some difficulty in explaining why Ptolemy and Strabo make Pharnaceia and Kerasus two different places. Why Pliny should omit the latter altogether is not so great a difficulty, the geographical matter of this author being, in our opinion, almost as confused and inaccurate as his text now is corrupted and unintelligible.

Mr. Williams's essay contains more extracts from rare, curious, and learned works, than almost any book of the same size which we have met with; and it will therefore be occasionally useful to those who take an interest in Asiatic geography, and are unable to procure many of those scarce travels to which he appears to have had such ready access.

We are told that this work is probably the forerunner of another and larger on the geography of Asia. Should the new undertaking ever be accomplished, we cannot help thinking that the author will find reason to alter many of his opinions, and that the declamatory, and self-satisfied tone* which prevails in his essays, will be exchanged for a style and manner more suitable to such inquiries.

The two essays are inscribed to the memory of Xenophon the Athenian, and Alexander the Macedonian, whose marches and campaigns have furnished material for the author's investigations. It is a new contrivance in the dedicatory line to misrepresent the most important acts of a man's life, and then place his name at the head of the misstatement.

* See pp. 12, 32, 186, &c., &c.

ITALY.

Italy, by Josiah Conder, author of the Modern Traveller.
3 vols.

MR. CONDER has himself stated at the beginning of his work, vol. i. p. 25, his object to be, 'not so much to take a statistical or scientific survey of Italy, as to supply the tourist with a better itinerary than the common guide-books, and also to furnish the reader who may not be disposed to cross the Alps, with a correct delineation of the characteristic features, the natural curiosities, historic sites and scenes, monuments and living manners of Italy.' The first part of his promise Mr. Conder has amply fulfilled, and his book is certainly a superior sort of travellers' companion; but the very arrangement suited to such a purpose is not, in our opinion, the best calculated to give the foreign distant reader an accurate insight into the condition of a country. 'To a foreign traveller,' observes Mr. Conder, 'the territorial divisions of a country are matters of little interest, nor does he concern himself with other boundaries than such as intersect the lines of route.' And thus, in order to indulge the tourist, the lines of route are followed in the work before us, and we are led on from capital to capital, from church to church, and gallery to gallery, after the usual manner of a guide-book, accompanied certainly by superior discrimination, better taste, and a greater variety of information.

A full and satisfactory description of Italy and its inhabitants remains still a desideratum, such a description as the scholar, the politician, the philosopher, the statesman, might safely consult; such a description as would make us acquainted with the state of society in each Italian state, its government and laws, its resources and industry, the habits and feelings of the different classes of the people, by which we might form a reasonable surmise of their wants, wishes, and future prospects. Unfortunately, the *moral features* of Italy constitute the very part which books of travels are deficient in. Most travellers have drawn caricatures of Italian society and character. They have confounded dates and localities, and given to the present Italians the features of those of half a century or a century past. We will instance a few of these aberrations out of the writers that Mr. Conder has quoted as his authorities. 'I am told,' says Simond, 'there is now about one murder a day committed at Rome! Formerly the average was from five to six each day!—Vol. iii. p. 403. Now this is an exaggera-

tion too gross to stand in need of refutation. How Mr. Simond could believe such a story we are at a loss to conceive. He travelled, we know, very rapidly through Italy, and he seems to have mixed but little with the better informed classes, yet, in a mind naturally shrewd like his, the monstrosity of such an assertion ought to have excited doubt and elicited further investigation before he allowed himself to repeat it in print. The nearest approach to it is found in some history of the pontificate of Pius VI., where it is stated, we do not know on what authority, that, during the *eighteen or nineteen years of that Pope's reign preceding the first French invasion of 1798*, about six thousand murders were committed, *not at Rome, but in the whole Papal states*. Every body knows how much the system of police and the administration of the laws have altered at Rome since those times ; the writer of this has himself lived at Rome for years at different epochs, and never heard of the *daily sacrifice of a human victim* perpetrated in that capital.

On the subject of Naples, p. 425, Burnet is quoted, who says that the Jesuits *were* the proprietors of half Apulia, and were also the great merchants of Naples ; that the Dominicans had four-and-twenty houses of both sexes, the Franciscans nearly as many, besides Benedictines, Olivetans, &c. ; that the plate of the churches was estimated at eight millions of crowns, and that four-fifths of the wealth of the kingdom was the property of the clergy.' Now all this was tolerably correct in Burnet's time, except the last sentence, which is evidently an exaggeration, but it has nothing to do with the state of Naples in the nineteenth century. And yet Mr. Conder concludes the quotation by saying—' How shall such a country be emancipated ?' as if the number and wealth of convents were, *in our days*, the main obstacles to the regeneration of Naples ! Such is the inference that most readers will draw from this paragraph. They will think that Italy is as much monk-ridden as Spain itself. And yet it is a fact, that most of the convents, especially the wealthy ones, have been long suppressed ; that the plate is gone to the French ; that the few convents remaining have little or no property, and receive a small allowance from government in compensation for their former domains ; that, in short, monkish influence is completely gone at Naples, as well as in most parts of Italy, and that the re-establishment of the Jesuits has been a complete failure. Mr. Conder must have had some suspicions of the fact, for he adds in a note—' Most of these convents, *we presume*, have been suppressed.' Why, then, mention the number and wealth of the convents as the

great obstacle to the regeneration of the country? A little more vigilance and caution might have prevented such incongruities.

While speaking of the Geonese Riviera, vol. i. p. 211, Italian villages are described as follows:—

‘ On entering these picturesque dwellings, windows without glass, rooms without furniture, dirt, poverty, and idleness, every where present the frightful signs of all that is wretched in the condition of the inhabitants. More desolate, forbidding habitations than the generality of those occupied by the Italian villagers, it is not easy to conceive of. They are almost always half in ruins, &c. . . . ’

This description shows again the fallacy of attempting to describe Italian scenes and manners in the lump. No authority is quoted for it, and we must presume that Mr. Conder has gathered it from some tourist’s partial account of some Italian village. It might apply to some parts of the Campagna of Rome, of Calabria, or to some villages in the Apennine chain, but certainly it *does not apply* to the *generality* of Italian villages, and still less to those of the Riviera of Genoa, which is one of the most thriving districts of Italy, and where the inhabitants enjoy, perhaps, most domestic comfort, with the exception of those of Tuscany. But the ideas of comfort are as different with an Englishman and an Italian, as their respective climates. Still there are notions of proper decencies and comforts among Italian villagers; and their beds, their linen, the women’s wardrobe and trinkets, their kitchen utensils, afford abundant evidence of this to those who, like us who write, have entered their humble dwellings.

Speaking of Genoa, p. 259, we read with astonishment, ‘ that the trade is now chiefly carried on under foreign flags, through dread of the Barbary corsairs ! ’ This was the case under the old republic, and matters continued as bad under the French conquests through fear, not of the Barbary corsairs, but of the English privateers and men-of-war. But since the peace, and more especially since Lord Exmouth’s expedition against Algiers, in 1816, the Genoese or Sardinian flag is free and respected all over the seas; Genoese vessels proceed to the Black Sea, to the Levant, to South America, and the East Indies; and the Sardinian navy, consisting of one ship of the line, several frigates, corvettes, and brigs of war, has been fully able to attest the national independence and protect their trade against the African pirates, as was proved by their attack on Tripoli not many years ago. In fact, this security of their maritime trade is the great, the only compensation for the loss of their independence, which

the Genoese have obtained since their annexation to Piedmont, and their sailors are conscious of it, as we have often heard from them. The Genoese maritime trade, we do not mean that of the city of Genoa alone, but of all the coast, of the towns of San Remo, Alassio, Zingueglia, Settri, Chiavari, &c., has increased amazingly since the peace: hundreds of merchant vessels, some of large size, have been built—so far from the 'Genoese trade being carried on under foreign flags.'

Of the character of the Milanese we have in Mr. Conder's work very extraordinary accounts. A Swiss traveller, Galiffe, quoted at p. 401, vol. i., says:—

'No where have I met with more amiable people than the Milanese. They have all the vivacity of imagination, all the liveliness in their exterior appearance which one *expects to find* in Italians, without the least mixture of that low cunning with which the Italian people are reproached.'

Hear now Mr. Rose, *ibid.* 'As the Milanese, as a man, is cut short of his fair proportions, so I should say he is behind all other Italians in mental qualifications, being generally heavy and slow of understanding.' What is the reader to make of such conflicting statements? He is left without any clue to the real truth of the case. This is the consequence of trusting to the accounts of other writers, each of whom has his prejudices, national, political, religious, and *of caste*. We should say, from what we have seen of the Milanese, that both accounts are incorrect. Travellers are too apt to judge of a people from a few individuals whom they meet in their way. The Milanese are a good-natured, sociable race—they can hardly be called, however, the *most amiable* people in Europe. They themselves would modestly refuse Mr. Galiffe's compliments as to their *vivacity* and *liveliness*; in fact, these qualities do not make part of their character, as they do essentially of those of the Venetians and Neapolitans. But neither can we subscribe to Mr. Rose's sweeping sentence of their being *behind all* other Italians in mental qualifications. They are slower, but their judgment is perhaps surer and safer than that of the South Italians. With regard to their personal appearance, although there are certainly many cases of deformity, we should say, that, taking both sexes together, there is as great a proportion of beauty at Milan as in any other great Italian city. Men are handsomer at Naples, and perhaps at Turin—women at Rome and Genoa. The Italian army under Napoleon was remarkable for the good appearance of the men, and it was only composed of Lombards and Venetians.

One observation may serve to explain some of the inac-

curacies we find in travellers' accounts of Italy. Those which are most quoted in Mr. Conder's work, Matthews, Simond, Williams, Rose, Galiffe, &c. travelled between 1816-19. Their accounts are now becoming out of date. They travelled in a season of uncertainty, discontent and distress, especially in the north of Italy. Owing to bad springs and summers, the crops had failed in 1816 and 1817. The great political changes recently occurred had unhinged the structure of society, and deprived many men and families of their accustomed resources, whilst the new order of things had not yet had time to become settled. If we consult Forsyth, we find a very good judge of the fine arts; but he also travelled in disturbed times—in 1801-2, another period of uncertainty and distress for Italy, soon after the destructive wars of the French revolution. In every one of these tourists, especially in Rose, Forsyth, Bell, and Simond, are to be found good and accurate sketches in detail of some particular part of the country, or of some branch of information connected with it, yet they only constitute detached materials for a complete description of Italy. Such a work would require not months, but years of assiduous observation, during a protracted residence in each of the various states—would require a competent knowledge of the language, or rather *languages*, of Italy; it would require an author to consult official documents, statistical and legal reports, the country newspapers and journals, to attend the courts of law, the churches, and mix with Italian families on a familiar footing, rather than listen to coffee-house and table d'hôte tales and partial reports of prejudiced partisans. The interior of Italian families is generally unknown to the foreign traveller. The Italians do not live so much in public as the French; they do not speak their sentiments so heedlessly and with so much volubility; they are a people of deeper feeling and of more pensive habit: Italy cannot be known so easily as Paris. But is it worth while to take all this trouble in order to attain a competent knowledge of Italian affairs? We do not answer this question; we only say, that, unless all this trouble be taken, and we believe it could hardly be done by any single traveller, we shall never have a satisfactory account of Italy; and until it be so described, we would recommend foreigners, and the English reading public especially, to be on their guard against giving belief to hasty surmises and to sweeping sentences passed on a country containing nineteen millions of people, of various races and habits, having eight or ten capital cities, and as many distinct states and governments.

Having stated so much as to what a work 'on Italy' should be, we shall now briefly follow Mr. Conder through his entertaining itinerary. After a general account of Italy and its subdivisions, we have a good description of Savoy, which occupies one hundred and thirty pages, rather too great a proportion for a *transalpine* province annexed to Italy. We get next over Mont Cenis to Turin, to which fine city, too much neglected by travellers, justice is done. Then follows an interesting description of the Vaudois, or Valdenses, from the works of Gillies, Acland, &c.; we then proceed to Nice, and, lastly, to Genoa. Of the latter it might have been observed, that they are the only people in Italy who still retain a strong republican feeling. The author then retrogrades in order to lead his readers over the other great passage by the Simplon, which with the other Alpine passes of the Splügen, Bernardine, St. Gothard, and Mount Bernard, are remarkably well described from Brockedon's excellent illustrations. At last, by Como, we are led to Milan, with which city the first volume concludes.

Vol. II. takes us to Pavia, Lodi, Piacenza, and Parma. A mistake occurs concerning the history of the last dukedom, which it is said was given up to the Emperor of Germany in the last century, while, in fact, a branch of the Spanish Bourbons held possession of it until the French invasion, and even afterwards, until the last Duke, Don Ludovico, exchanged it for the kingdom of Etruria, from which he was afterwards driven by Buonaparte. Don Ludovico's son is the present Duke of Lucca. We have also an account of the ruins of Velleja, a Roman colony which was buried by the fall of a mountain, and which has been little noticed by travellers. We next pass to the diminutive duchy of Modena: these small inland states are the dullest and most miserable of Italy. From thence to Mantua, Verona, Padua, and lastly Venice. Here we fall in with an old pleasant acquaintance, Mr. Rose, who, in his 'Letters from the North of Italy,' has given the best account of this part of the country. The idea of Venice, even were she again independent, 'recovering now the sovereignty of the Adriatic,' p. 240, appears to us one of those dreams in which foreigners, little acquainted with local circumstances, are apt to indulge. Next we proceed through Ferrara and Bologna, to refined and polished Florence, of which, as well as of Pisa, Leghorn, and Siena, we have a good account. The Florentines are called 'the Greeks of Italy,' while there is a much stronger dash of Greek character in the Neapolitans and Sicilians.

Vol. III. is occupied chiefly by Rome, and this is, perhaps,

the best part of the whole work. Mr. Conder has consulted Burton, as well as Miss Waldie's 'Rome in the Nineteenth Century.' Both the ancient and the modern cities are elaborately and graphically delineated. It is to be regretted, however, that too much trust is reposed in the superficial accounts of, and spleenetic tirades against, the moral qualities of the people, in which Forsyth, Matthews, Galiffe, Simond, and the author of *Anastasius* have too freely indulged. There are good qualities in the modern Romans, for which they get no credit. With regard to the extensive and important kingdom of Naples, we have only a few hurried pages on the capital, which are the most superficial part of the work. Mr. Conder, however, observes in his preface that he left Naples altogether out of the plan of his work. Should he attempt a description of that fine kingdom, including Sicily, we trust he will consult impartial authorities, native as well as foreign. Materials are not wanting, but they lie scattered about. The large island of Sardinia is also neglected, although we have had lately no less than three elaborate works upon it, Manno, *Della Marmora*, and Mimaud, to which we may add Captain Smyth's.

We might have wished for some more information on the various codes of laws which are in force in the different states, as well as on the practice of the courts, matters of the greatest influence on the state of society. The Austrian code in Lombardy, that of Leopold in Tuscany, the *Codice Sardo* in the Sardinian states, the French code, with few modifications, at Naples, all these differ in their spirit and in their provisions, and would seem to require some analysis and comment.

A good topographic description of Italy, of its mountains, lakes, and rivers, its natural productions, and its geological phenomena, might form of itself a very interesting work. The long chain of the Apennines and its numerous ramifications afford ample matter for investigation. Portions of them have been accurately described by native naturalists, such as Brocchi, Targioni, Galanti, Tenore, &c.

The commerce of Italy also deserves more details, which can only be derived from information collected on the spot. Italy even now imports, we believe, nearly four millions sterling of English goods annually, although the kingdom of Lombardy is closed against English manufactures.

SCHOOL-BOOKS OF GEOGRAPHY.

GEOGRAPHY is so universally acknowledged to hold a conspicuous station in general education, that it becomes both an interesting and necessary duty to inquire into the method of instruction generally pursued in this department of knowledge, and to consider the value of the books most generally used to assist learners in its attainment. With respect to the method of instruction, we believe that it is often varied to a certain extent, according to the judgment or discretion of the teacher, even though the same text-book may be used; and it is therefore better to discuss the books in most general use, than to hazard any vague remarks on modes of tuition. One thing, however, may be laid down as tolerably certain, that in this, no less than almost every other department of the school routine, it too often happens that children are made to learn by rote page after page of some text-book of geography*, and condemned to burden their memory with facts, or rather formulæ of words, denoting facts, which they cannot understand. No explanation is given by the teacher, or required from the pupil,—and the spirit of inquiry is often not only not encouraged, but positively checked. It would not be possible to devise means more successful for damping the ardour of an inquiring mind; and no more effectual obstacle could possibly be thrown in the way of acquiring any practical information. So long as the first steps to knowledge are revolting, and calculated to excite disgust, no reasonable advance will be made; but let the most pleasing means be adopted, let interest be excited, the spirit of inquiry encouraged, and the result will be the rapid developement of ideas, the acquirement of real and useful knowledge. A word or two on the use of maps. It may justly be questioned whether in many cases these are ever consulted at all: certainly they are not considered in their true light, when regarded as aids only to the books. Maps are to large districts what surveys and landscapes are to those less extended. They are the representatives of the real things, and as such they are the indispensable *text-books* which should never be out of the sight of the student. So far from being looked on as aids to books, the books should be considered as explanatory of them. To learn by heart a book of geography, without having an accurate knowledge of the maps, is not a whit more sensible than learning by heart the catalogue of

* This is the method recommended in the preface to Goldsmith's Geography.

an exhibition of pictures without ever having gone to see them. STUDY THE MAPS is a rule of the very highest value in teaching geography; and as it is observed or neglected, so will the learner's progress be quicker or more slow.

With reference to the books in use as manuals in teaching, it would be both unprofitable and uninteresting to go through a catalogue even of the principal. Goldsmith's, Keith's, Ewing's, and Butler's are, perhaps, those most known. We select the first of these for some observations; and we may add, that many of the general remarks which we shall have to make on it, apply more or less to the others that have been named with it.

Goldsmith's Grammar of Geography*—Longman.

This is the most widely circulated manual of geography in this country. We believe that it is not going beyond the mark to say, that above three thousand copies of this book make their way every year into the hands of youth. A book so extensively used must have a powerful influence, and that influence should be beneficial. Such a work should not only be superior to most others of a similar nature, but should also possess a high degree of real value, and be recognized as an efficient aid in the communication of sound knowledge. Correct description of facts—plainness and perspicuity of language—the judicious selection and arrangement of interesting matter, and, in addition to all this, some sensible hints for its use, are qualities which the thinking public must reasonably expect in a book worthy of the first station as a class-book of geography. The book now under examination falls very far short of being such a one as we could wish it to be. It is indeed so far from being a desirable book to be placed in the hands of children, that we feel convinced that little but mischief can result from its use. It is open to great and serious objections, and these may be urged both on general grounds and on account of the particular errors which are found in it from one end to the other.

The first serious objection that we shall make to it is, the *brief*, *imperfect*, and *mangled* way in which geographical facts are stated throughout the volume. Instance, p. 15, § 18, 19, 20.

' 18. Europe has four inland seas, called the Mediterranean, the Baltic, the Black Sea, and the White Sea. The part of the Mediterranean which lies *east* of Candia, is called the *Levant*; and that on the *north* of the same island, the *Archipelago*.

* Is the Rev. G. Goldsmith a real person, or is he one of the family of Blair, Adams, &c. who have given existence and names to so many books?

‘ 19. The principal European islands are, Great Britain and Ireland, Iceland, Candia, Sicily, Sardinia, and Corsica, with the Balearic isles, which include Majorca, Minorca, and Iviça, the Ionian islands, and the numerous small Greek islands in the Archipelago.

‘ 20. The principal rivers in Europe are the Volga, the Don, the Danube, the Dnieper, the Rhine, the Elbe, the Loire, the Tagus, and the Thames.’

How vague and unsatisfactory are such notices! Let us suppose the case of a traveller going through an unknown country. He arrives at a river, and easily learns its name from the inhabitants, but this, if he be a man of any inquiry, will not satisfy him. His notion of it is yet imperfect, and he cannot make his chart of it either mentally or on paper, till he knows its general direction, the country in which it rises, those through which it flows, the sea into which it empties itself; and he will not consider himself acquainted with the subject till he has informed himself on these points. The case of the pupil is quite analogous—the sensible teacher indeed will ever regard him as a tarry-at-home traveller—the materials of his mental map must be fully provided, and correctly too, or else nothing has been done. But in the book now in our hands every river is a Niger, or rather what the Niger was in years past—every range of mountains like the unknown Mountain of the Moon, every country like the ultra Scythian regions of Herodotus, unknown and fitted only for the dominion of fable. What does it profit the child to know that there is a Danube, if he does not know where it is—its direction, the countries which it flows through, the towns on its banks, &c.?—and what will it avail him to know that there is a something in Europe called Prussia, Switzerland, &c. if he does not know that they are states in certain situations, having different relations as to magnitude and position with respect to certain other states, and connected with them by certain political and commercial bonds of union? Such vague descriptions can be of no substantial service. It is the *clear* statement of *definite* facts only that can form a solid foundation for future geographical inquiries. The rationale of the science, which consists in the consideration of every geographical fact in reference to man as a moral and political being, must be based on *truth*. The elementary facts are indeed the skeleton of the science, the frame-work on which we must build and perfect our knowledge. Goldsmith’s Grammar we consider not at all adapted to form a ground-work of this description.

Objections may be made, secondly, to the general want of a systematic arrangement in his book—an objection which of

itself is sufficient to condemn it. There is a total want of unity in the plan. Similar facts are stated in different order in different parts of the book, and in some cases useful facts are omitted altogether, to make room, it would appear, for less important matter. The most incongruous statements are heaped together with scarcely any regard for classification, while other facts naturally connected are given piecemeal in such a way as to be of no service to the learner. It will be well to give an instance of each of these defects. Of China it is said,—

‘ China is celebrated for the great antiquity of its government, for an immense population, for the variety of its manufactures and peculiar productions, for the excellency of its inland navigation, and for its reserve and jealous policy towards other nations.’

Similar notices abound in different parts of the book. Can such vague and general statements be in the least degree serviceable to any one that is not, in some degree at least, acquainted with the facts on which they are founded? and so strung together, can they be applied to any practical purpose, when, with difficulty, they have been stored in the memory? As an instance of the last fault mentioned, viz. the piecemeal communication of knowledge, we may instance the Rhine. This unfortunate river is cut up into four or five different pieces. A slice is given to Switzerland, another to Germany, a third to France, and a fourth to Holland; but this is all in separate parts of the book, and not a word is said of its being one of the finest rivers in Europe, having a general north-western course of nearly eight hundred miles, rising on the northern declivity of the Alps, running through part of Switzerland, and, after passing the towns of Bâsle, Manheim, Cologne, &c., falling by several channels into the German Ocean. This river is only an instance of the defect here lamented. Similar, or slightly different examples might be multiplied.

A word more on the general defect in arrangement. Too much importance cannot be attached to a clear distinction between the natural features and divisions of the world, and those which are formed merely to suit man’s convenience. The former are permanent, the latter are factitious and varying as the fortunes of their inhabitants; and the former are consequently those upon which the latter must be based, and by which they must be regulated. Let the reader of these observations take up Goldsmith’s Grammar, and examine the whole or any part, and he will find no attention whatever paid to this fact. Mixed as the *loose* and inaccurate descriptions, or rather vocabularies of physical detail are

with notices of local and political matter, they mutually clog one another, and the learner is not only left without any real knowledge, but, from the quantity of confused and erroneous notions that are floating on his brain, his road is impeded towards the future attainment of knowledge from other sources.

It will be well to show that the book, besides its general defects, contains particular errors, which make it an unsafe guide for the student. A few only will be mentioned, sufficient to substantiate the assertion just made.

Page 9. 'Venus, as seen through a telescope, is like the new or half moon.' The truth is that both Mercury and Venus, as well as the other planets, in general present to us only a part of their illumined discs, and therefore exhibit phenomena similar to those of the Moon,—being sometimes *full*, sometimes *horned*, and sometimes *gibbous*. We may remark here, that all the statistics of the solar system in this page are very incorrect, as may be seen by comparing them with those in Mr. Barlow's paper in the *Encyclopædia Metropolitana, Astronomy*. If numbers are to be drilled into the learner's head, they should at least be correct.

Page 16. 'Norway is the most mountainous country in the world:' with the exception, perhaps, of Nepaul, Columbia, and Switzerland. That it is the most craggy and uneven country with which we are acquainted, is probably true, but this is not what would be understood or what is meant. But in p. 85, 'of general facts worthy of being remembered,' it is not included among 'the most mountainous countries in the world.'

Page 18. The extent of Norway is said to be 145,000 square miles,—read 118,500. Population stated at 910,000 —read 1,100,000 in 1826. Sweden—Extent, 195,000; read, 169,000. Population, 2,615,000; read, 2,800,000. The accounts from which the corrective numbers are taken are official.

Page 22. 'The Vistula is in Poland.' Here is an instance of the loose way in which facts are stated in this book. The Vistula, at least the greatest part of it, *was* once in Poland, but not since the time of the partition. It runs through Poland; but it neither rises in it, nor is it in Poland when it falls into the Baltic Sea. About two-thirds of its course only are in that country as at present constituted.

Page 27. Population of Bavaria 5,000,000. The official returns for 1827 give it under 4,000,000.

Page 30. 'The once famous Delphos is now in ruins.' Delphi (properly the name of the people) is the usual and

correct name for that place. Does the learner know *why* it was once famous? If he does not, the remark is quite useless.

Page 51. Among the provinces of Asiatic Turkey is mentioned 'Diarbekir or Al-Jezira.' These two names belong not to the same but to different provinces, the one being N.N.W. of the other.

'On the banks of the Tigris lie the extensive ruins of ancient Babylon.' The map of Asia attached to the book will enable the pupil himself to correct this error. In that we find Hillah, the site of Babylon, correctly laid down—not on the Tigris, as Bagdad is, but on the Euphrates, nearly due south of Bagdad—which is right. From what is said of these rivers in this page, any one would suppose that they were separate rivers, quite distinct, while, in reality, they unite and run in the same channel for more than ninety miles.

Page 63. 'In the Persian Gulf are the islands of Ormuz and Gombroon.' It would seem as if Gombroon were called an island, while it is, in fact, a town on the main land opposite to Ormuz.

Page 70. 'The principal rivers of North America are the Missouri, the Mississippi, the Ohio,' (all of which are distinct, it would seem from the book,) 'the Hudson, the Chesapeak, the Delaware, and the St. Lawrence.' The same sentence recurs at page 72. There is a Chesapeak *bay*, which receives the rivers Potowmak, Susquchanna, and others, but no river of that name.

Page 71. We learn that 'the United States of North America promise to become, on the abolition of slavery, which they now tolerate, the most powerful and happy community in the world.' Instead of this very inaccurate remark, insert the following:—'Slavery does not exist in any of the Northern States (see 210), and only in one or two of those which Mr. Goldsmith (see 211) calls the Middle States.'

Page 85. Among 'general facts worthy of being remembered,' it is said here that 'Persia is one of the most level countries in the world.' This assertion requires considerable modification; but we acknowledge that it is partly corrected at page 63, where we are told, 'the singular features of Persia are *mountains* and deserts.' If we were to proceed to mention the omissions of important facts, and give instances of slovenly and obscure language, this review might be much extended. Enough, however, has been said to show that Goldsmith's Grammar is not a good text-book of geography;

and it is hoped that these remarks may induce teachers and others to examine it more minutely than probably they have done.

At the end of the volume there are about forty pages devoted to Physical Geography, which certainly contain some useful information; but the matter has not always been drawn from the best sources. For example, page 94:—‘ Except the Caspian Sea, whose waters are a little brackish, the waters of all lakes and rivers are mild, sweet, and fit for human purposes.’ What would the Rev. J. Goldsmith say if he had a mouthful of water from the Dead Sea, or if he were to make a pilgrimage through Persia and central Asia, under a vow to taste all the lakes and rivers that he met with on his journey? Again, page 98, in the section ‘ on the differences of languages and nations,’ it is said, that ‘ people who speak the same language, or a dialect of the same language, belong to the same nation.’ According to this principle, the negro, when a native of a country where English is spoken, is an Englishman; and, as the ‘ Germans, Dutch, Danes, and Swedes are one nation, speaking all dialects of the same language,’ it follows that our English negro is also a German, Dutchman, Dane, and Swede. This, we believe, is not the author’s meaning; but the fault lies in the inaccurate way in which his principle of distinction of nations is laid down.

Some exercises follow upon the use of the globes. We may observe that the globe when properly employed is a very useful instrument: but the solution of problems according to rules not explained, can be of little service. The use of the globes, as taught in this book, is merely a mechanical contrivance, and can lead to no sound knowledge. A few questions on geography, with a table of latitudes and longitudes of remarkable places, (a very useful idea, which ought to be carried still further,) and a vocabulary of proper names, close the volume. There are seven maps in the book; without venturing any opinion on their intrinsic value, it is not too much to say that they are sufficiently good to accompany Goldsmith’s Grammar.

The same general defects which characterise Goldsmith’s Grammar will be found, more or less, in nearly all the school manuals used in this country. A little volume, however, has lately made its appearance, which may be regarded as an exception. To this it is our purpose to direct the reader’s attention.

Woodbridge’s Rudiments of Geography—Whittaker.

‘This is an *unacknowledged* reprint of a book published in

the United States a few years ago, drawn up by Mr. Woodbridge, the present editor of the American Journal of Education. As it is peculiar in its plan, it becomes necessary to furnish some explanation of it for the benefit of those who have not seen it. The author has well considered the question,—‘How shall I best instruct a *child* in geography?’ He has seen the confusion that reigns throughout the previously existing books of this nature, and has attempted—it will be thought, perhaps, with considerable success—to introduce something like order into the universal *chaos* of things. He has the merit of being the first to introduce the principles of *comparison*, *classification*, and *generalization*, hitherto quite forgotten, into this department of elementary knowledge.

The work may be considered as divided into three parts. In the first, taking it for granted that the student, in whose hands the book is placed for the first time, is quite unacquainted with what he is about to learn, Mr. Woodbridge contents himself with laying down, in a plain and familiar way, a few broad and leading truths of a nature easy to be understood, and such as are best calculated to prepare the way for more solid attainments at a subsequent period. Thus a very few general statements are made on the nature of the world, and its relation to the other parts of the solar system; the use of maps is familiarly explained, the leading natural divisions of the earth given, and other information communicated likely to familiarize the learner with the nomenclature of the science. Some general statements follow of the leading facts, first of physical, and then of political geography, to be substantiated by the maps and charts which accompany the volume. It will be seen that some care has been taken to introduce only such matter as a child can understand, either by himself, or with very slight aid* from the instructor.

The second division of the book carries the student, who is now pretty well acquainted with the earth’s general features, through its different countries successively, and informs him of facts respecting them as particular districts, or impresses more deeply on his memory the truth of the general statements, by referring him to particular facts for their verification. Each section concludes with a number of questions which can only be answered by the study of maps; and at the end of this description of each portion of the world,

* We speak here not of that aid which a lazy teacher can give by *telling* the *passive* listener; but of that assistance, the only one of any value, which leads the child, step by step, to find out for himself the information that he requires. Knowledge so obtained cannot easily be forgotten.

travels on the maps are suggested, and routes laid down, in order that, by this exercise, the pupil may gain correct notions of the relative bearings and distances of places; and an opportunity is given at the same time for repetition, without disgust, of much matter previously learnt. This plan argues much in favour of the author's good sense: his preface, indeed, shows that he has correct views respecting the real nature and proper use of these pictorial descriptions. We trust that every one who uses the book will follow the directions which are laid down on this head.

Part the third contains such general views of the regions, climates, animals, vegetables, and minerals of the earth, and of the arts, commerce, literature, and customs of its inhabitants, as could not have been understood without the accurate knowledge communicated by the preceding exercises. Some classified tables on the height of mountains, length of rivers, extent and population of countries, and revenue of states, are prefixed for occasional consultation.

We will now briefly inquire what is the value of the book, and how far it can be made available for the purposes of education. We have much satisfaction in being able to say, that there is no fault in it which *radically* affects its character. From the description that has been given of its contents, it will be seen that it is constructed on certain principles, in compliance with a plan sufficiently well adapted to convey knowledge easily and gradually to a juvenile student.

The division of the matter is well conceived, and it has evidently been formed on experience, and with a view to practice. General notions on any subject must be formed, before particular knowledge can be attained, in the same way as the outlines of a picture must be laid down before the shades and colouring can be introduced. This has been done, and, on the whole, well done. At the same time, however, that this praise is given to it, as due to its general merits, it must be observed that there are considerable defects in the different parts of the work, which should be corrected before it can be placed with unreserved confidence in the pupil's hands. We shall particularize a few in the first part, and content ourselves with making some general observations on the deficiencies of the other two.

1. *Hypothetical Statements.*

Page 4.—Of comets 'only a few have been known to return, and at intervals of 75, 100, or 200 years.' We think that Encke's comet rather disproves one part of this assertion. But this is not the only instance where hypothesis is introduced. Positive facts, not conjectures, are what the

beginner should have presented to him. The latter are dangerous to all but advanced students.

2. Vague generalities open to frequent exceptions :

Page 9.—‘ Countries usually contain men of one nation, speaking the same language—Switzerland, Asiatic Russia, Turkey, Hindoostan, and many other regions are exceptions.’ Such assertions are of little value, and only calculated to mislead a beginner. So again in p. 15. ‘ Deserts are immense tracts of land, usually level, on which scarcely any water is found.’ The desert of Zahara is level, low, and without water; but those of Persia, Arabia, Asia minor and central Asia are both high, and traversed by chains of hills. The deserts of Asia abound with salt lakes and salt streams. Such frequent exceptions so much invalidate the assertions, that they are calculated rather to injure than instruct.

3. General statements made without clear explanation.

Page 11.—‘ Oceans are always nearly of the same temperature.’ The temperature of water is not, it is true, so variable as that of the air, but the difference is still very considerable. Take, for instance, that of the Gulf-stream, in lat. 22°, nearly 80° of Fahrenheit, and compare with it that of the Atlantic in lat. 60° or 70°. Seasons, likewise, and the depth, materially affect their temperature.

Page 17.—‘ Mountains serve to moderate the heat.’ The reason of this should have been explained.

4. Incorrect Statements.

Page 9.—‘ The islands of the Pacific Ocean are divided into *Australia* and *Polynesia*.’ Australia is only one island, sometimes wrongly called New Holland. Australasia is meant, which comprehends New Holland as well as the larger islands in its vicinity, New Guinea, New Zealand, Van Diemen’s Land, &c. The error is repeated in the following page. Page 9.—‘ Behring’s Strait, about forty-eight miles in width.’ Read thirty-six.

Page 14.—‘ A high cape is called a promontory.’ Shakespeare indeed speaks of the blue promontory nodding to the world; but geographers are pretty generally agreed in considering a cape to be the extreme point or termination of a promontory.

So it is correct to say, ‘ Cape Comorin is the extremity of the southern point of India.’

Page 17. ‘ Length of the American chain, 11,500,’ more correctly 9000.

Page 21. ‘ The cataracts of the Nile in Nubia are very grand.’ This is a common notion, but very incorrect. The *cataracts* (those of Essouan, Wady Halfa, &c.) are, in fact,

no cataracts at all, but little more than rapid currents running through a channel obstructed with rocks. The most authentic drawings which represent them give no idea of grandeur to these falls.—See Denon, Plates, No. 69.

Page 28. 'Within the polar circles the nights of winter are from twenty-four hours to six months in length.' This is quite unintelligible, and, as it stands at present, certainly most incorrect. We shall not venture to propose any amendment.

Page 41. 'A republic is that government in which the people choose their rulers, as Switzerland.' Besides the vagueness and looseness of the definition, the illustration is incorrect. The general tone of the Swiss government is decidedly *oligarchical*. Certain families enjoy elective and legislative privileges to the exclusion of the people at large. America, Mr. Woodbridge's own country, would be a proper example.

The chief objections to the second part of the work arise from that unsatisfactory looseness which attends all brief and sweeping assertions. We are certain that they are of very little value, in as much as they communicate no real information. There is also a want, in some parts, of that systematic arrangement which is necessary to aid the memory in the retaining such details. The sections on the cities of Asia are open to condemnation on his own allowance; for 'they are arranged in a manner that seems only adapted to a Gazetteer, or a book of reference.'—(See Preface). In both the second and third parts may be discerned, even by the casual observer, a considerable number of inaccuracies, and further observations would, no doubt, swell the catalogue. It is to be lamented that the notices on commerce are so little satisfactory from the vague and general way in which they are expressed. Some persons will consider the entire omission of the *historical* part of geography a striking defect in the book. It might easily be inserted in its proper place without confusing the remainder, or overloading the matter of instruction.

The *Atlas*, or book of maps and charts, which accompanies Woodbridge's Rudiments, presents features somewhat different from the common school maps. It has been made for the book under the author's own directions. It contains eight maps, and, in addition to them, two charts, one exhibiting the prevailing religions, governments, civilization, and population of the different countries of the world respectively; the other an *isothermal* chart, giving a comprehensive view of the climates and productions of different parts of the world. The

maps have *symbolical* marks placed in different parts of them denoting the size, importance, population, and other relations of the various places contained in them and mentioned in the Rudiments. The benefit resulting from the use of such artificial aids to memory is, we think, highly problematical. Perhaps a philosophical distribution of the different facts, so stated on the maps, through the different parts of the Rudiments would be, on the whole, an improvement. If, however, the teacher always makes a point of drawing from his pupils the information symbolically given in the maps, either orally or in writing, every good end will be answered. Respecting the correctness of the charts in all their detail, it would be wrong to hazard an opinion without much more knowledge and research than we are able to bring to the inquiry. As far as we are competent to judge, they are sufficiently correct for the general purposes of school learners.

Some pains have been taken to ascertain the value of these maps in point of correctness of outline, and of the situation of places. But as to the limited utility of maps on so small a scale there cannot be two opinions. Maps, to be useful in school-teaching, must be large, not for the purpose of containing a vast multitude of names, but in order that the outlines may be truly defined, and something like an approximation made to reality in laying down the few geographical positions that are necessary for teaching ; and, above all things, that as fair a representation as possible may be given of the physical features of countries. The German large maps, called *Wandcharten*, are found very useful for this purpose.

A SYSTEM OF POPULAR GEOMETRY.

A System of Popular Geometry, &c. by George Darley, A. B.
Third Edition. John Taylor, London.

WE have elsewhere stated that it is the plan of this journal to notice generally works which have obtained circulation, whether good or bad, and also to endeavour to draw good works from the obscurity in which they are often left during the first years of their existence, leaving that which is both bad and unknown to its fate. On two of these grounds the work now before us has claimed our attention, for it has reached its third edition, and has merit enough to induce us not to regret its success. We cannot, however, agree

with the author, who seems to think that his work is a mighty engine, silently but powerfully fostering a mathematical spirit in the country. His preface shall speak for itself; and though we can hardly believe he wishes to be understood quite literally, yet his pretensions are, in any case, somewhat startling. He commences his preface to the second edition as follows :

‘ It is far more creditable to the public than to us that a second edition of our *Geometry* has been so soon called for. Encouragement given to those who labour in facilitating the road to knowledge is but an involuntary effect of proportional ardour in those who pursue it. To disseminate the principles of mathematical reasoning, or rather a taste for mathematical reasoning, among the several classes of society, was the object of our publication; and this object appears to have been fully attained.’

Again, in the preface, Mr. Darley observes of his own work :

‘ Thus are all the useful principles and propositions of Euclid collected in a small, unexpensive volume, the obscure departments of the science made intelligible to common understanding, and the Elements of Geometry so arranged as to unite systematic regularity with rigorous exactness of demonstration.’

This coming from the author himself would be rather strong, even in a fiftieth edition. It must have been meant, we presume, to save trouble to reviewers, by enabling them to make the proper article with paste and scissors. We agree, however, with the author to a certain extent; and if he will only admit the faults which we think we can point out, to the same extent, it is very likely our notice of his next edition will show that we have amended our bill. We proceed to the merits and demerits of the work.

Saving and excepting certain points hereafter to be mentioned, we think this work the best calculated to give children the first notions of geometrical reasoning of any with which we are acquainted. The style is for the most part clear, the propositions well chosen, and much difficulty is saved by the introduction of definitions and axioms in their proper places, instead of lumping them at the beginning as in Euclid. The book itself, a good-looking duodecimo, is not near so frightful as the larger octavo in which Euclid is usually dressed; and while we admit its merits, we are inclined to think that to this its sale is due in a great measure, since the ‘ discerning public’ sees better with the eyes of sense than with those of reason, and, as publishers know, finds merit in a gay cotton binding, which it does not observe in plain blue paper. We feel assured that

this is the work which parents would, in any case, like to put into the hands of their children, from its appearance alone ; and we are happy to think that, judging as they do, they have not come worse off.

We must here observe the great improvement exhibited in the statement of the indirect demonstrations, or *reductiones ad absurdum*, in which the consequences of the false supposition are not, as is usual, positively asserted as springing from a legitimate hypothesis, but are preserved in their dependence upon their original, by the use of the conditional mood and the hypothetical syllogism. This removes what is generally found to be a serious difficulty with beginners, who are required, in the very outset of their career, in direct contradiction to their senses, which declare the thing assumed to be impossible, to take up, in the form of a positive assumption, an hypothesis inconsistent with one already made. It is concealed from them that similar arguments are frequently made use of in other subjects, by the new and uncouth form in which the consequences of the assertion upon trial are stated. We may explain this to the unmathematical reader in the following way: the argument employed in the *reductio ad absurdum* is of this nature: ' If A were equal to B, C would be equal to D; but C is not equal to D, therefore A is not equal to B.' This is the ordinary form of language, and is perfectly conclusive, if the premises be correct. It would be thus stated in Simson's Euclid: ' C not being equal to D, it is asserted that A is not equal to B. For, if possible, let A be equal to B, then C must be equal to D; but (hyp.) C is not equal to D, therefore C is, at the same time, equal to D, and unequal to it, which is impossible, therefore A is not equal to B.' To all but the mathematician the first of these two will be the more simple.

It is sadly to the disadvantage of every elementary work, as far as reviews of it are concerned, that its merits must be general, and must consist in the actual execution of its parts, so that to show them clearly it is necessary to quote the whole book, while, in a poem, a play, a novel, or a history, a few passages of quotation may render all praise unnecessary. Its defects, on the contrary, have more individuality, and may be shown up in a more striking manner. It is thus that many notices, highly favourable to works of this species, appear to consist of nothing more than a record of their faults ; and it would seem as if the words of praise thrown in at the beginning and end, were merely the sugar and milk to a decoction of sloe-leaves. We warn our readers not to judge

our opinions by the comparative quantity of type expended in praise and blame. The balance is much in favour of our author; but, on the other hand, we would not have it supposed that we really consider the following matters as trivial. We have great defects to produce, some of which have almost staggered us in this opinion of the work before us. We proceed to the true office of a critic, as settled by the highest authorities; *viz.* the finding of faults.

Our first complaint is, that the author makes a great point of continually telling the little children for whom he writes—how much better his various articles are done than the corresponding ones in Euclid. Now this is a most erroneous impression; and, were it ever so true, would matter nothing to those for whom this work is intended. It might do very well for Simson, who translated Euclid, to remark the defects of the original and to vindicate the alterations which he introduced; but well as the Greek geometer deserves such a compliment, it is now superfluous in an elementary writer to inform his reader in what points he chooses to vary. We will, however, take an instance or two.

Mr. Darley objects to the difficulty of the ‘Pons Asinorum,’ and supplies its place with a demonstration in which there is a ‘fallacia suppositionis,’ allowable enough, it may be, if the law of continuity is assumed. That which is proved of two distinct triangles is all at once made to hold good, when those two triangles have, by the alteration of their parts, become one and the same triangle. The general demonstration could never have been applied to the particular case in which alone it is used, without making the question much harder to a beginner than even the proposition of Euclid. If an isosceles triangle were supposed to turn round its axis through half a revolution, and in this state were considered as another triangle, the application of Euclid’s fourth proposition would give the demonstration, here concealed under a generalization which we look upon as inferior to that of Euclid, for the beginner at least. It is but fair, however, to add, that Mr. Darley has given Euclid’s demonstration in his notes.

Again, instead of defining an angle as the inclination of two straight lines which, if it be wholly unmeaning, is, by this very defect, prevented from causing any confusion, Mr. Darley observes—‘By an angle, in fact, is meant the *degree of increasing width*, a *separation* between the lines which form it; this depends not upon the *length*, but upon the *direction* of the lines.’ The italic words are so in the original, and, being thus made prominent, we will observe, that the

only clear idea is that of *length*, which an angle is not, while there is sad confusion between the *increasing width*, *separation*, and *direction* which it is, or depends upon. It would have made the matter much more clear, to have said, the angle made by two lines is the opening which they make, and then to have defined equal angles, &c.

Mr. Darley complains of Euclid's definition of a tangent to a circle as 'vague and unsatisfactory.' We give Euclid's definition, followed by that of our author:—

'A straight line is said to touch a circle, which meeting the circle, and being produced, does not cut the circle.'

'A right line which, however produced, meets a circle in but one point, is called a tangent to that circle.'

If Euclid be taken literally, these are precisely the same, since a circle is a *figure*, not a *line*; and to cut a figure, is to divide it into parts. Even if, by circle, be understood the circumference only, the distinction appears to us to mean nothing.

We should recommend the author, in his next edition, to throw aside the inconvenient practice of adding an abundance of notes in small print to each section of his work. If an article be really wanted by the beginner, why not put it into the text; if not, why put it in at all, in a work designed for beginners only? Notes are sore temptations to controversy; if a book be entitled 'Notes,' these are sure to be *critical* and explanatory; and Sir Walter Scott tells us of a poem which was projected purely that Ossian, Macpherson, and Maccribb might be demolished in the notes. To supply the place of the notes in this volume, we beg to suggest that the lines of the text might be widened, so as to allow of larger capitals for the letters denoting lines and angles. This would add more clearness to the work than a volume of small printed notes, even though they demolished Euclid from one end to the other.

But we leave all comparatively minor faults, to proceed to the great blemish of this work; and a sad blemish it is. There are no terms in gentlemanly criticism too strong to express our dislike of the very ungeometrical theory of parallels which the author has substituted for the method of Euclid. And here we find a singular assertion in the preface:—

'So long as Euclid's doctrine of parallels forms, at least in its present state, the groundwork of the science, geometry can never be made a popular study. When such a monstrous assumption as the twelfth axiom continues to stand in the very threshold of elementary mathematics, it will for ever repel common understandings, and for

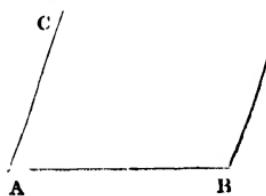
ever confine the study to those who have genius or perseverance much greater than ordinary?

What do the beginners who open Euclid care whether any point be demonstrated or not, provided it be clear? They almost universally err in not demanding enough of demonstration, and it is the method of demonstration itself, and not the defects of it, which have hitherto prevented geometry from becoming a popular study. Does the author mean to assert, that the world in general have a taste for reasoning so well cultivated, and a power of judging so mature, that all, even children, turn with disgust from any assumption which is unaccompanied by demonstration? If this were so, then geometry, which is not a popular study, ought not to become such, for its principal occupation would be gone, and the great advantages, which it is asserted to possess as a branch of education, would have no existence. It is what is called the dryness of the study which prevents its universal cultivation, and this supposed defect would be altogether remedied, not by adding more demonstration, but by leaving out demonstration altogether, and exhibiting the mere facts in a striking form. But let us consider a little what is this tremendous assumption of Euclid, which so many have tried to dispense with, and in which just as many have confessedly failed.

Every proposition in geometry is ultimately the result of some assumption, which ought to be perfectly self-evident. One of these, of which it has never been asserted that a demonstration is possible, is that 'two straight lines cannot inclose a space.' This, the tenth axiom of Euclid, is the only axiom (with the exception of our bone of contention) which is purely geometrical, for the first seven and the ninth are arithmetical; the eighth is a mere definition of the word equality, and the eleventh is a theorem, capable of demonstration, in which light it is considered by Legendre and others, among whom is Mr. Darley. On this axiom, *viz.*, that two straight lines cannot inclose a space, depend the first twenty-eight propositions of Euclid, which leave us in possession of the fact, that two right lines which make angles with a third, on the same side, which are together equal to two right angles, will never meet, however far they may be produced in either direction. These two lines Euclid calls *parallels*. Now, to proceed further in the chain of reasoning, without some reference to the senses on the subject of these lines which never meet, has hitherto been found impracticable. On looking at two such lines, various very

evident properties suggest themselves. They are, for example, equidistant; their directions are the same, that is, they always mark the same point of the compass, and so on. Now, conceive a fixed line, and a point exterior to it. From the exterior point draw a perpendicular to the fixed line, and about the exterior point let a right line revolve. It is as evident to the senses as that 'two straight lines cannot inclose a space,' that the revolving line will first, if long enough, cut the fixed line on one side of the perpendicular, and afterwards on the other, and that, in passing from one of these positions to the other, there is one position, *and one position only*, in which the moving line will never meet the fixed line, though both be ever so much lengthened. All this is not only self-evident, but demonstrated, with the exception of the assertion in italics, that there is only one such position. For this Euclid appeals to the senses, though in an indirect way, not well calculated to make the simplicity of the assumption perfectly manifest.

Having demonstrated that the line A C passing through A is parallel to B D, *if* the angles C A B and A B D are together equal to two right angles, instead of saying that A C is the *only* parallel to B D which can be drawn through A, he says that every other line passing through A is not parallel to B D,



which is pretty much the same thing. This is the famous twelfth axiom, which Mr. Darley says 'has been justly denominated the *disgrace* of Euclid.' This is what is to keep geometry from ever becoming a popular study. We confess to having simplified the form of the axiom, but the actual point assumed, is that of Euclid; the 'monstrous and unwarrantable supposition,' (p. 123.) 'not self-evident,' p. 38. But we have Mr. Darley's authority for stating that his system of parallels is 'simpler, shorter, and more strictly demonstrative than that given in the common Euclid.' (p. 38.) To it then we turn with great expectations, for though we think the method of Euclid extremely simple, and fond as we are of what is simple, we are still fonder of what is simpler.

In p. 16 our author proceeds thus :

'Two right lines are said to be equally distant from one another, when any two points whatsoever in the one not the greater, and any two equally remote points in the other being taken, the right lines which join each opposite pair of points towards the same hand are equal to each other.'

‘Parallel right lines are those which are equally distant from each other. This is the simple, clear, and familiar notion of parallels, &c.’

Now suppose a pupil were to put this question—You tell me that, in order to ascertain whether or no lines are to be called parallel, I must measure equal distances on both, and join the extremities, and see whether or no the lines which I get are equal; if I have done this with twenty sets of distances, and found the new lines equal, may I conclude that the lines are those which you mean to call parallel, or must I measure a twenty-first pair of distances, and so on *ad infinitum*? The author must reply, No; for one trial is sufficient: if the new distances are equal in one case, they will be so in every other; but this I cannot prove, it is a theorem ‘which you must take for granted. ‘In fact, we conceive the principle must be self-evident to any one who has a clear notion of right lines’ (p. 39). To this *we* conceive the pupil would demur; in fact this theorem is assumed in the definition, in spite of the author’s frequently expressed disapprobation of such a proceeding. Thus it is by no means certain to the beginner, that there are such things as parallels at all, according to this definition; but this, the author says, ‘depends on a *self-evident* truth in the mind of the reader, which, because it is so obvious, writers on geometry do not think it necessary to mention.’ What! is it so clear as to require no mention, that there are lines from which if millions of pairs of equal distances were cut, the two lines joining the extremities of each pair would be equal, and this when it is declared that Euclid, in assuming the axiom above mentioned, has assumed that which is not self-evident? Euclid, having shown that there is such a thing as *one* parallel to a given line passing through a given point, assumes on the clearest grounds, as far as the senses are concerned, that there cannot be two: Mr. Darley sets out with a definition which leaves the student without any certainty that there are such things as parallels, and which definition involves a theorem of as much complexity, as any which is proved in the first book of Euclid. And yet in the same work we find Euclid’s definition of perpendicular lines objected to, because it assumes that an angle can be divided into two equal parts. (p. 37.)

This ‘monstrous and unwarrantable’ doctrine of parallels is of itself a serious objection to the work in question. We recommend it, nevertheless, to parents and teachers, urging them however to replace the system of Euclid upon this point. If, however, in a subsequent edition the author strikes out most of his notes, placing in the text as much of them as is

absolutely necessary, and does not quarrel with the simple and natural doctrine of parallels, until he can supply another in its place which requires less assumption, we shall rank his work among the most successful efforts to simplify the abstruse science of geometry, which have ever been made in this country.

SCHOOL EDITIONS OF TERENCE.

IN a former number of this Journal it was recommended, that the first book to be put into the hands of one commencing the Latin language should be the Gallic war of Cæsar, and, among other reasons for selecting this work, we pointed out the fact, that in the first book of the Commentaries no verb ever appears in the second person, and one only in the first. This circumstance enables the teacher to consult the convenience of his pupil by abridging the accidence of the grammar, and by placing before him the conjugation of the verb in one third of the usual space.

We shall not at present state any other reasons for selecting Cæsar, though other reasons may readily be given; but it may be asserted with some confidence, that a pupil will learn from this book a very considerable portion of the Latin language; and under a judicious teacher he will soon be able to translate into the original any passages of his author given him in English.

As soon as he is thoroughly acquainted with the whole Gallic war, he will be well prepared to encounter the new difficulties presented in dialogue; and he will not easily find a book better adapted to his purpose than the plays of Terence. It is therefore important to examine the different editions of this author that are used in English schools. This task we propose to undertake; but we shall first mention those conditions, which, in our opinion, must all be fulfilled before we can give unqualified praise to any edition. We look, then, first for a correct text, founded on manuscript authority, allowing some latitude, however, for correction of the text, even in opposition to MSS., where that correction is founded upon undoubted principles of criticism. Important variations of the text may always be given at the foot of the page without any material sacrifice of space. In addition to a good text, we may fairly expect some short account of the author, of course in English; and in a chronological table of a single page, it would be easy to give a few dates connected with the writer, or the political events

of his time. Any disquisition upon his style and writings is, perhaps, better omitted. Such essays are seldom of much value; and in boys they only encourage an affectation of knowledge. A collection of good notes is almost essential for the use of the master, who has but rarely time enough to draw up any for his own use, even supposing him to possess the ability. But these notes, we cannot too often repeat it, must be in the English language; and, farther, it seems expedient that they should be separated from the text; for when, as is usually the case, they are given at the foot of the page, the pupil will, for the most part, neglect them while *preparing* his lesson, seeing that he can answer any question from his master by referring to them at the time, and, of course, if no question be asked, no note is ever looked at. As to the matter of the notes, the most valuable are those which explain any peculiarity of construction, by reference to other similar instances in the same author. Indeed, in such a writer as Terence, where scarcely any historical or geographical information is called for, such notes as we have described are nearly all that is requisite. We must make, however, one addition. It is true that, in almost every school, Terence is treated as a prose author; but it is equally true that his lines are strictly subject to the laws of rhythm; and considering that his metres bear a much closer affinity to those prevailing in our own language, than the hexameters of Virgil, or the lyrical compositions of Horace, there does not seem any good ground for this neglect. We must therefore look upon any edition of Terence as imperfect, which does not afford a pupil the means of comprehending his metres, and classifying those prosodial difficulties which school-grammars omit to notice. Lastly, a good verbal index will be of great service both to master and pupil, where the mode of explanation consists mainly in comparing one passage with another similar to it. The six plays of Terence occupy but little space, so that all we have proposed may certainly be afforded to the schoolboy without any extravagant increase of bulk or expense.

The Delphin edition, with which we commence, possesses none of these requisites, with the single exception of an excellent index; and this indeed is too often the only merit of the Delphin editions of other authors, and has alone saved them from the neglect which they merit.

The Westminster edition contains, we know not why, only four plays, the *Heautontimorumenos* and the *Hecyra* being

omitted, though the former of these two plays is referred to in one of the notes. It is difficult to decide what text has been adopted by the anonymous editor, as he gives no information upon the subject; but, from a collation we have made of the *Adelphi*, we may venture to state that the readings are almost always supported by MS. authority. An unnecessary attempt is, however, occasionally made to reduce the orthography of Terence to the standard of our English schools, by rejecting such forms as *neclegentia*, Prol. 14; *servolus*, 1, 1, 2; *parvolus*, 1, 1, 23; *tristitiem*, 2, 4, 3; *totiens*, 1, 2, 48; and the accusatives *nobilis*, Prol. 15; *aedis*, 1, 2, 8; 2, 1, 16; *testis*, 2, 1, 49, &c. Yet even in these changes there is a want of consistency, for we find in different passages, *clivōs*, *aequom*, *volt*, *salvōs*, and even the very words *servolum*, 4, 2, 27; *parvolam*, 2, 4, 10.

In 3, 1, 1 we observe a passage that requires notice. It must be granted that the editor has a numerical superiority of MSS. in his favour for the reading. *S. Obsecro, mea nutrix, quid nunc siet?*—*C. Quid siet rogas?* Three of the best, however, have *quid fiat rogas?* And even if all had agreed in the reading *siet*, still the idiom of the language must have decided against it. Thus 3, 3, 19.—*S. Quid agitur?*—*D. Quid agatur?*—and again, 1, 2, 4.—*M. Quid fecit?*—*D. Quid ille fecerit?* Nothing is more common than, when a question has been asked by one party, for the other to repeat it with an expression of surprise; and invariably is the indicative changed to the subjunctive.

Again, in 2, 1, 24. The Westminster text has—*Non sivit egestas facere nos. Tu nunc tibi, &c.*—with every MS., except the Codex Bembinus; but this being by far the best among them, and as the metre supports it, we certainly prefer *sit*.

We confess these criticisms are minute, but it is through these slight corruptions that the text of Terence has been converted from verse to prose; and though Bentley may have been too bold in his notions of restoring the original, there can be little doubt that his alterations are for the most part judicious. Certainly no critic had ever a better conception of his author than Bentley had of Terence. If he has materially erred, it has been in giving more than the proper weight to his ideas upon accent, and altering the text so as to meet these ideas in defiance of all authority; for instance, in 1, 2, 50,—

Curémus aequam utérque partem : tu álerum
 Ego item álerum. Nam ambós curare própemodum
 Reposcere illum est quém dedisti—

the position of *ambos* is well adapted to mark the emphasis upon it. But Bentley has laid down a law that the accent cannot fall upon the last syllable of a word in the second meter of an iambic trimeter; and, in obedience to this law of his own creation, he transposes the words *ambos* and *curare*—

Ego item álerum : nam cùrare ambos própemodum—

The change seems to us a change for the worse even as regards the rhythm, and certainly as regards the emphasis, a principle of more importance than any other, and one to which even the laws of prosody must yield. That there is generally a cæsura in the middle of the third or fourth foot of the common trimeter is true; and such a cæsura will prevent the accent from falling otherwise than Dr. Bentley wishes; but we must not insist upon this cæsura as an absolute law.

In the passage we have been considering, the Westminster editor has the correct reading—*ambos curare*. In other instances, however, the same editor has rejected the emendations of Bentley, where, by the slightest alterations, such as *ista* for *istac*, *intercesse* for *intercessisse*, &c., he has preserved the metre of our author; and in more than one case the change made by Dr. Bentley has been as much called for by the principles of the language and the sense of the passage, as by the nature of the verse. Occasionally the great critic seems himself to have passed over what appears to us to be at variance with the Latin idiom. In the *Andria*, 1, 3, 10, the MSS. have—‘ *Haec Andria, Sive istu* uxor, *sive amica* ’st, *gravida e Pamphilo* ’st.’ Bentley saw that the metre was faulty; and his remedy was to change *Sive* into *si*. That *si* . . . *sive* . . . may be found together, is possible; but the correction here required, is simply *sive* or else *sive ea*. To apply to the same person in the same breath, two inconsistent demonstratives, *haec* and *ista*, is contrary to all reason. Besides, after the person had been defined by the words, *haec Andria*, no demonstrative is required, or even admissible. The little unemphatic *ea* (which never has a demonstrative power) is the only pronoun that the sense would admit; perhaps the metre also would admit it.

The notes of the Westminster edition are all in Latin, and therefore in general useless for the school-boy. We must also object to them, that the pupil is too often referred to *other* authors, which he may, perhaps, not possess; and this, too, when reference might as readily be made to other parts

of Terence himself. The little phrase, ‘*quid istic*’—*Well, have it your own way*, is, of course, a difficulty to a beginner; and the more so, as his dictionary will most probably afford him no help. This phrase occurs at least three times in the *Adelphi* alone, *viz.* 1, 2, 53; 3, 2, 52; and towards the end of the last scene but one. The Westminster editor gives us notes upon two of these passages—*Locutio Terentio familiaris et aegre consentientem significat*;—and again—*Verbum aegre consentientis*. *Donat*.—But, we repeat, all difficulties of this kind are best explained by an English translation, and a reference to other passages of the same kind, and, if possible, in the same author. Now, if a boy uses this Westminster edition for the single play of the *Adelphi*; if further he reads the notes in spite of their Latin form, and obeys the directions of the editor in consulting the different books to which he is referred, he must possess Cicero’s speeches and orations, Homer, Virgil, Horace, Ovid, Plautus, Livy, Florus, Phaedrus, the Greek Testament, Nonius, Festus, Priscian, &c.; and in many cases he must have particular editions of these books, for instance, Drakenborch’s *Livy* (7 vols., 4to.), Duker’s Notes on *Florus*, Bentley’s *Terence*, &c.

Lastly, no information regarding Terence himself is given in this edition, and all questions of metre are invariably passed over.

The German edition of Reinhardt is, perhaps, the best existing edition for the use of schools. The text, where it differs from the preceding edition, has almost always the advantage. The metrical accents of Bentley are inserted, and, with this assistance, the pupil will find much less difficulty with the metres. To the life of Terence, the disquisition on his metres and the notes, the chief objection is that they are in Latin; but it is not fair to make this a subject of complaint against the editor, seeing that to an English pupil they are certainly more accessible in their present form, than they would have been in German. But we still recommend the book as the best for schools, first, for the correctness of the text, and secondly, for cheapness. The paper, it must be confessed, is not very good; but those, who are more particular about the colour and quality of the paper than the goodness of the edition, will find every thing they desire in the Baskerville *Terence*, the only objections to which are that it is especially difficult to translate the Latin, or detect the metre of the verse. As a book intended only to lie open on a study table, it is certainly superior to the rest.

As we have had occasion in these remarks to notice more than once the inattention of editors to the metres of *Terence*,

it will not be out of place to enter somewhat at length upon this question. Undoubtedly according to the usual notion of the metrical laws to which the Latin comedians yield obedience, it cannot be surprising that the subject has met with such general neglect. It is said, for instance, that, in the iambic verse, the last foot must indeed be an iamb or pyrrhic ; but that, in all the other places, for the iamb may be substituted a dactyl, spondee, anapest, tribrach, procelesmatic, nay, according to some, even a cretic ; so that the rhythm of the verse depends upon little more than the shortness of the penultimate syllable. Thus the following lines, which Virgil intended as dactylic hexameters, would pass muster very well as unobjectionable iambic lines.—

Virginibus Tyriis mos est gestare pharetras—
Huic conjux Sichæus erat ditissimus agri.

As for the procelesmatic, we feel considerable difficulty in conceiving how any human voice can utter four short syllables in succession. Yet, such feet, if we admit only the common laws of prosody as taught in our grammars, occur repeatedly in every play of Terence. In but a single scene of the Adelphi, five examples present themselves : 3. 2. 20, *e | riperem ocul | os* ; 21, *ruerem ager | em* ; 23, *sine me ego* ; 37, *Era lacru | mas* ; 51, *neque preti | um*. In the second place, the violent elisions, which occur in all Latin poets, but more particularly in the comic writers, would appear even more unnatural than they do, if our notions on this subject had not been hardened by long obedience to the dogmas of prosody. In many instances, the greater part of a word is absorbed ; and in the phrase—*i ergo*, (Ad. 5. 1. 68.) the first word is actually annihilated. But we shall not have stated the case against Terence's metres in its full strength, unless we add, that even all these licences, when admitted, are not sufficient to explain the difficulties of his metre. Thus we find in the last scene of the Adelphi such feet as—*quidem por | ro*, vv. 7 and 22 ; *quidem muli | erem*, v. 17 ; *quidem tuo*, v. 17 ; *quidem pri | ma*, v. 19, &c.

Yet, after all these concessions, we still contend that to a Roman ear the verses of Terence had all the melody of the pure iambic verse. The difficulty we believe to arise from our inattention to, and ignorance of Roman pronunciation ; for most undoubtedly, according to modern accent, we must all agree with Wieland, that a very large proportion of the verses are wholly devoid of melody. That this is the chief cause of the discord appears from the fact, that, where an iambic line ends in a word of *three* syllables, and consequently the English and Latin accent coincide, the verse is not un-

frequently in perfect harmony. From the third scene of the third act, we take the following successive lines (vv. 11—15.); and we only request the reader to be on his guard in pronouncing *lætius*, so as not to let his tongue soften the two syllables *ti-us* into *shus*.

Quo pácto haberet, énarramus órdine.
 Nil quíequam vidi lætius. Pro Júppiter,
 Hominis stultitiam. Cónlaudavit filium;
 Mi quí 'd dedissem cónsili' egit grárias.
 Disrúmpor. Argent' ádnumeravit ilico.

But the only satisfactory mode of arriving at any conclusion will be to take a whole play, (the *Adelphi* for instance,) and to examine the metre throughout. This we ask the diligent reader to do, as we ourselves have done; and we think he will not find many impediments, if he take into account the principles which we shall now endeavour to establish.

In every language, at any given time, it will be found that changes of pronunciation are taking place; the necessary consequence of which is, that the *written* language is an imperfect representation of the *spoken* tongue. Nothing but a standing committee of orthography with despotic powers can prevent this being the case. In our own language and French the difference is very strongly marked; but in Spanish the power of the Royal Academy has been for the present effectually exerted, in the re-adaptation of the one to the other. Another half century, however, will prepare fresh work for that society.

In the second place it will be generally allowed, that, in all languages, there are certain combinations of words where the syllables are huddled together in pronunciation, and lose much of their individual power, while the very same words in other less familiar combinations are read as they are written. To the abbreviated forms of—*God be with you*—*How do you do*—*Three of the clock*, &c.—every language can furnish parallels. In Latin, for instance, the phrase, *bono animo es*, seems to have degenerated into some sound of a cretic form. It repeatedly occurs as such in the *Adelphi*; and in the *Rudens* of Plautus, 3, 3, 17, we have the identical phrase in the last place of a line of cretics :

Ó sálū | tis meae | spes, tac', ac | bono animo 's.

If such contractions were frequent or variable, it would of course be a hopeless inquiry; but we believe we shall have room, even in the remainder of the present article, to bring forward, and perhaps explain almost every difficulty that occurs in the *Adelphi**. But the reader must not trust

* To those not familiar with Terence, it may be stated, that the verses of the

altogether the prosodies of the school-grammars or the examples given in the *Gradus ad Parnassum*. The latter work informs us that the second syllable in *suspicio* is short, and quotes an hexameter beginning with *Suspicione Paris*; but the line is deceitful. It should be pronounced *Suspīcyone*, &c. like *Flūviorum*, &c. in Virgil. In Plautus and Terence the word is very common, and invariably is the second syllable long. It does not occur in Virgil or Horace; but in the later writers (when the final *o* had lost its power), as Martial, Ausonius, &c., we meet with it again as *suspīcio*. The laws of prosody again are both imperfect and inaccurate. The little imperatives—*mane*, Ad. 2, 3, 10; 3, 4, 21—*cave*, 2, 1, 16; 3, 4, 12—*vide*, 2, 1, 41; 2, 2, 30; 4, 2, 11, 20—*abi*, 2, 1, 13; 2, 2, 12; 4, 2, 25, &c.—*jube*, 2, 4, 21; 5, 5, 10, &c.*—*redi*, 2, 1, 36—*tace*, 2, 4, 16—are all of them (in the comic writers at least) to be pronounced either as two short syllables or one long syllable. In some of them the latter is the more probable, as Dr. Carey has shown in the case of *cave*, by reference to Cicero's remark, that the cry, *Caueas*, i. e. *Caueas sicut eas*. That these words should depart from the general analogy of the contracted imperatives is not remarkable, when we consider that they are used almost as interjections. With ourselves *look* has degenerated into *lo*. The French have their *voi-la*, *v'la*, *voi-ci*, and *gar* for *garde*.

The reader of Virgil, recollecting such lines as *Uno eodemque tulit partu*, &c., will not be offended by a *crasis* not more violent in *meo*, *mea*, *meorum*, &c., *de eadem*, *eum*, *tu eum*, &c. Bentley was of opinion that in these cases the *e* before the vowel had the sound of our *y*. Such instances, however, as *tu eum*, 4, 2, 21—*qui eam*, 5, 6, 9—and all those (the above case from Virgil among others) where a vowel of the preceding word is elided, notwithstanding the *crasis*, are obstacles to his explanation. If the *e* has the sound of our consonant *y*, as it exists in *youth*, *young*, &c., no elision

Adelphi are all, with the exception of a few lines in Act iv. Sc. 4, either iambic or trochaic. In the editions where the metrical accents are marked, as Bentley's, Reinhardt's, &c., there is no difficulty in distinguishing the two metres. When the accent appears on the *first* syllable of a foot, the measure is trochaic, otherwise iambic. It will be found convenient, in reading the trochaic lines, to prefix some long syllable, and thus reduce them to iambics. The ear of an Englishman is generally better acquainted with the iambic metre.

* The acts of the Adelphi are differently divided in different editions. The references in the text are always to that of Reinhardt. The difference between his division and Bentley's is this:—Act v. Sc. 1 and 2, in Bentley's edition, correspond to Act iv. Sc. 8 and 9, in that of Reinhardt; and Act v. Sc. 3, 4, 5, 6, 7, 8, 9 of Bentley respectively to Act v. Sc. 1, 2, 3, 4, 5, 6, 7 of Reinhardt.

could have taken place. Such a word as *is, eu, id, &c.*, when not emphatic, is, above all others, likely to suffer by a hasty delivery, just as we ourselves often shorten *him* and *them* into 'm and 'em.

Of the same nature with the above are the contractions occurring in *sua, tuum, fuisse, fuit, puer, 4, 7, 10; duo, 5, 1, 37.* If the other class of words will admit of our giving the *y* sound to *e*, Bentley may be right in reading these *swa, twum, &c.* Whether he is so in all the cases, we doubt. If *forem* and *fore* have arisen from *fuerem* and *fuere*, it is not improbable that *fuisse* too might be pronounced *fosse*; and the Italian has, in fact, adopted *osti* for *fuisti*; *fossi, &c.* for *fuissem, &c.* It should also be recollected that while Ennius, on the one hand, wrote *sas* for *sus*, the Troubadours used *mos, ma* or *mia, mon*, for *meus, -a, -um, mos, mas* or *mias* for *meos, meas*; and in like manner they abbreviated the corresponding parts of *tuus* and *sus*, by laying aside the first vowel. The possessive pronouns in the French, Spanish, and Italian languages also, particularly in the older writers, bear evidence of a similar reduction.—(See Raynouard, *Grammaire comparée*, p. 161.)

The case of *puer** is explained at once by the forms *Lucipor, Mucipor*; and inscriptions exhibit both *por* and *pora* for *puer, puera*. The word no longer exists in Italian, except in some of the provincial dialects, and in these it is always a monosyllable. *Duo* is closely analogous to our own *two*; but it is safer to compare a language with itself, and the tendency of the Latin to blend the two syllables, *du-o, du-i, &c.*, into one is clearly shown in the forms *bonus, bellus, bellum, Bilius, bis, bini, viginti, &c.*, from *duonus, duellus, duellum, Duilius, duis, duini, duiginti, &c.*

The most violent contractions are met with in the genitives, *hujus, ejus, illius*; and we even find elision of a proceeding vowel in addition as: *Cratin | i huius | 4, 2, 42; es | se eius | 4, 3, 9; prim | um huius | 5, 6, 6; nepo | ti huius | 5, 7, 17.* Some part of our difficulty arises from the English barbarism of pronouncing the *i* in these words, like our own *j*. Setting this aside, it is not more extraordinary that *hujus* should at times be merely a monosyllable, than that *nullius* and *nulli* should both be genitives of *nullus*. Indeed the forms of *hujus* and *nullius* are strictly analogous. The stems both end in *o, ho, and nullo*, whence the genitive is produced by affixing the termination belonging to that case, *viz.*, *os*, or rather *iōs*. This would give us *nulloios* and *hoios*. The old

* Gocller, in his edition of the *Aulularia* (4, 1, 9), has *puer* for a dissyllable, but he has not one MS. with him. They have all either *pucri* or *pucris*.

genitive of the relative *quoius* is of this form, and the Homeric *λογοιο* has only lost the sibilant. In the later Latin it was common to represent the diphthong *oi* by a long *i*, and a mere *o* by the vowel *ü*. Hence *nullius* and *huius*. The Latins also often dropped the final *s*, as in the first declension, where the different forms of the genitive—*familiās*, *familiui*, and *familiae*—seem all to have arisen from *familiās*; and again in the fifth, where an old genitive *rēis* seems to have been the parent of all the forms of that case—*reī*, *rēi*, *rē*, *rēs*. So in the *o* declension, the Greeks seem to have passed from *λογοιο* through *λογοο* to *λογου*, and the Latins from *nulloios* through *nulloi* to *nulli*; but they had also *nullius** by shortening the penult of the original genitive. The pronouns of a language generally retain the old form longer than the other nouns, yet they also must in the end submit to curtailment and contraction. What the shorter pronunciation of the genitives *hujus*, &c., may have been, it is useless to inquire; it is enough for our present purpose to know that it was monosyllabic.

In 4, 4, 14, we find *diū* a monosyllable, and in 4, 5, 15, *diu* *huc* becomes one. The French *jour*, *journée*, the Italian *giorno*, all connected with the Latin *diū*, *diurnus*, &c., are satisfactory witnesses (independently of our organs of speech) that *di* followed by a vowel sometimes assumed the sound of the English *j*. Another example of the same change appears in the Italian *oggi*, from *hodie*. Nay, the metres of Terence almost require us to consider *hodie* itself as a disyllable. The derivation of the word, too, is in favour of this, for an anapest *hōdē* is inconsistent with the length of the allative *hō*. In 2, 2, 7, the metre requires that *qui hodie* should represent either an anapest or a spondee, but it seems rather a violent elision to sacrifice the long vowel in *qui* to a short vowel in *hōdē*. In 4, 2, 48, *exerce* | *bo hodie*; 5, 7, 10, *postre* | *mo hodie*; 5, 7, 22, *processis* | *ti hodie*: we have other instances of the same nature, and certainly wherever the word occurs in this play, the metre will, to say the least, be improved by giving it the very pronunciation of the Italian.

The genitive *rei* occurs repeatedly as one long syllable, *viz.*, 2, 1, 23; 4, 5, 10, &c.; and, in 4, 2, 6, we find the same in the case of the dative. But Cæsar himself, in a fragment of his *Analogia*, particularly mentions that *specie* and *die* were the correct forms of the genitive. Virgil,

* In such a word as *nullius* the sound of the *i* may be attached to the preceding or following vowel, and will consequently modify accordingly the pronunciation.

Horace, and Sallust confirm what he says. The case of the dative is still more simple. As in all the other *vowel* declensions, the iota of the dative is or may be absorbed—*a*, *musāi*, *musæ*; *o* not *nulloi*, but *nullo*, or *nulli* (λογω); *i*, not *turrii* but *turri*; *u*, *gradui*, or *gradū*; so when the final vowel of the stem is *e*, both analogy and authority support the claim of *die* to be considered as a secondary form of the more common dative *diei*. We might then without impropriety write, whether as a genitive or dative, *re* without an *i*; but it is matter of little importance which form be presented to the sight, so long as it be understood that these cases of *res* were often, if not always, monosyllables in Terence.

It is not a slight error in our prosodies that in cases of elision they always sacrifice the final vowel of the first word. We have already pointed out as one of the absurd consequences of such a principle that the imperative of *eo*, if thrown before a vowel, would be annihilated in the embrace. A fate not much better would befall the particles *dum*, *cum*, &c. But Terence had more mercy than our prosody-writers, and leaves them untouched in many cases, notwithstanding the following vowel is ready to absorb them, thus: 1, 2, 38, *Argen* | *tum* *dum* *e* | *rit*; 2, 2, 3, *concertas* | *se cum e* | *ro*; 2, 2, 24, *actum* *ag* | *am*, according to Bentley's reading; 3, 2, 43, *fatea* | *tur cum am* | *et*: 5, 1, 37, *Duo cum i* | *dem*; in all of which, Bentley observes, the particle occupies the centre of a trisyllabic foot, just as in Horace we have *coc* | *to num* *ad* | *est*.

Moreover in the common instances of elision it seems probable that both the vowels are often expressed as a kind of diphthong. Where the terminal vowel is an *i* or *u*, the sound of *y* or *w* may be substituted; and no part of the sound will be lost. Again, instead of sacrificing a long vowel to a following short one, it is acknowledged by all, except those who compile Latin prosodies, that the more correct course is either to deprive the long vowel of its quantity, still leaving it a partial existence, or at once to turn the tables upon the second vowel, and sacrifice it to its superior. In the first case *Di ament* will be an anapest, *Di āment*; in the second a spondee, *Di 'ment*. In, 5, 1, 11—*Ex te adeo est ortum*—the power of the sentence is almost wholly centered in the pronoun, and yet, by the orthodox rules of scanning, it nearly disappears in pronunciation. Would it not be more rational to read the phrase somewhat like—*Ex té 'jo 'st ortum*, softening the consonant of *adeo* as in the case of *hodie*; or thus—*Ex té dyo 'st ortum*. The same remedy

would be of service in 4, 5, 76. to *itaque ade | o*; and possibly *ne abeas*, 5, 3, 1. ; *me habeat*, 1, 1, 25. should be melted down into spondees *ne'byas*, *me'byat*, or something similar.

Dr. Bentley has said of the pronouns *ille*, *iste*, *ipse*, that the comic writers often make the first syllables short. As regards *ille* and its oblique forms with the derived adverbs, and perhaps *iste*, it will be found necessary in some places to consider them as monosyllables; nor is there any violence in such a supposition. The Roman language of the middle ages exhibits this pronoun in the various forms of *el* or *lo* for the singular masculine, *il* or *la* for the singular feminine; and in the plural *li*, *els*, *los*, as masculine, *las* as feminine, besides *lor* for *illorum*. In the French and Italian languages the monosyllabic form still prevails—French, *il*, *elle*, *lui*, *le*, *la*, *ils*, *elles*, *les*, *leur*—Italian, *lo*, *il*, *la*, *gli*, *li*, *i*, *le*, *lor*. In 3, 4, 30. *ille bonus*, followed by a consonant, represents some one of the feet that are admissible in an iambic line. Dr. Bentley would make it, that monster, a procelesmatic, instead of a dactyl, *il bonu'*. The line 4, 5, 58. begins—*Prodidis | ti et te et il | lam miseram*. Bentley would make the inclosed syllables constitute a dactyl, the pronoun *te*, not a very unimportant word in the sentence, almost disappearing; whilst, on the contrary, it is entirely preserved if we pronounce the words—*Prodidist | y et te 't | 'lam miseram*. These dactyls, anapests, and procelesmatics, for ever occurring in Terence according to Bentley, are the very bane of all melody in iambic verse. That the anapest and perhaps the dactyl are occasionally to be admitted we will allow; but they must not form the staple of the verse. Many of these objectionable feet may be disposed of by sliding over some of the short vowels. Thus *malevoli*, Prol. 15, *benificium* 1, 1, 47, may be held equivalent to *mal'voli*, *ben'ficium*, just as in Italian the adverbs *male* and *bene* are frequently deprived of their final vowels. *Homines*, Prol. 15, *animus*, 24, perhaps, lose their middle vowel as they do in French—*homme*, *ame*. So *femina* became *femme*; *asinus*, *asne* and *âne*; *domina* among the Italians *donna*, among the French *dame*. *Vehemens*, Prol. 17, may be a spondee, as it must be in the line of Horace beginning—*Vehemens et liquidus*, &c. Indeed when the letter *h* has on either side of it like vowels, we are always at liberty to contract the two syllables, as *reprehendere*, in Italian *riprendere*, and *nihilo* occurring in Horace at the beginning of an hexameter—*nihilo deterius*, &c.—till Fea and Doering restored the reading of the old editions, perhaps to save the metre, though Fea also gives as a reason, his desire to adhere to the *natural order of words*. He would,

of course, always write *minus nihilo, longius eo, &c.* *Populo* Prol. 19. possibly *pop'lo*, as in French *peuple*, and in Latin *poplicus* or *publicus*. Nay, Plautus, Aul. 2, 4, 6, has *pöpli* in the last place of an iambic trimeter. *Opera*, Prol. 20. i. e. *op'ra* like the Spanish *obra*, or the French *œuvre*. *Sine*, Prol. 21, or *sin'*, like *sans* French, and *sin* Spanish. *Aperient* Prol. 23, for *ap'rient*, like the Italian *aprire*, *ubrir* of the Troubadours, *ouvrir* of the French. So from *co-operire*, *coprire* Italian, *couvrir* French, *cover* English. In the Andria, 4, 1, 8, *ap'rient* closes a line of cretics.

This system of abbreviation might be extended to many other words—*ad'lescentia*, *mis'ria*, *stab'lis*, *sim'lis*, *gen'ris*, *al'quis*, *fam'lia*, &c. Again, by giving the sound of *y* to *i* followed by a vowel, we shall improve the melody of many lines, as *hāryolor*, 2, 1, 48—*auxīlyum*, 2, 1, 1—*mūlyerem*, 2, 1, 18; 2, 2, 21; 4, 2, 27; 4, 3, 8; 4, 5, 13—*rēdyero*, 2, 2, 24; 4, 6, 6—*pēryerim*, 2, 4, 19—*pēryimus*, 3, 2, 26; 3, 4, 12—*praetēryeris*, 4, 2, 42, &c. In the form of *mūliērēs* considered as of four syllables, there is nothing to prevent the lovers of tribrachs, &c. from placing the word in any part whatever of an iambic verse; and yet it is a remarkable fact pointed out by Bentley (Eun. 2, 2, 36), that it is invariably so placed as to have the accent on the first syllable, *mūliērēs*. This can only be explained on the supposition, that it was to Terence a word of three syllables, *mūlyeres*, with the stronger accent upon the first syllable. And here we will observe, that the syllable *li* followed by a vowel in Latin words, sometimes corresponds to a double *λ* in the Greek language, as *·αλλος* and *alius*—*·ξλλοματι* and *salio*—*φυλλον* and *folium*. If we may infer from this that the *λλ* of the Greek and *li* of the Latin language were pronounced like the *ll* of the Castilians, the *lh* of the Portuguese, the *l* mouillé of the French, and *gli* of the Italians, it follows that such words as *melius*, *alius*, *alienus*, &c. may be considered as all beginning with a long syllable, the two first being trochees, and so on. It is said by the Latin grammarians, that every word (with some few exceptions) had necessarily an accent, and that it could not be thrown farther back than the antepenult. Such a law must, in fact, belong to every language; but so long as a Latin word is allowed three and four short syllables in succession, it will be somewhat difficult to find a satisfactory position for an accent. *Mulieres*, for instance, must become *mulieres*, (just as we barbarously pronounce it,) in defiance of prosody, and equally in defiance of rhythm. On the other hand, *mūlyeres* corresponds, in the first place, to *moglie* in the

Italian ; it agrees with the accentual law, having the strong tone upon its antepenult ; and, lastly, it will be found always consistent with the harmony of Terence's lines.

So far we have examined the vowels only ; but there is reason to suspect that many of the consonants in certain positions were equally liable to disappear in pronunciation. That the *final s* was frequently a silent letter, at least among the older writers, is proved by the authority and practice of Cicero himself. But the fact is too familiar to the readers of all the older poets to require further notice. As examples in the present play may be given—*sumu'*, 3, 1, 4—*domu'*, 4, 7, 42—*bonu'*, 3, 4, 30—*vetu'*, 5, 1, 17—*novo'*, 5, 6, 15, &c. We might perhaps have added—*quibus*, 1, 1, 11.; 4, 3, 14, &c. and other words of the same form ; but we hesitate in so doing, from a suspicion that the letter *b* between vowels, and especially short vowels, was itself liable to extinction. The syllable *bi* or *ibi* seems to have been originally attached to words as significant of the dative* case, corresponding perhaps to the Homeric suffix *φι*, and to *bhyám* and *bhyas*, which in Sanscrit mark respectively the dative and ablat. dual and plural. The same sound, with the addition of an *s*, *i. e. būs* or *ibūs*, marked the same case in the plural. In the singular, the pronouns alone retain the full form, as *tibi*, *sibi*, *ibi* (from *is*), *ubi* (from *quis*), originally *cubi*, (as in *si-cubi*, *ne-cubi*, &c.), *utro-bi*, *ali-bi*, &c. But in the plural we may trace the full form through all the declensions, *deabus*, *duobus*, &c. We may then safely assume, that in an earlier state of the language, the letter *b* entered into every dative, *musabi* degenerating into *musāi* and *musæ*, *musabus* into *musais* (*μονοσίς*) and *musīs*, and so with the other declensions. *Cubi* became of course *cui* ; and the word *mihi* bears evidence of its being a corrupted form, for the letter *h* in the middle of words, and above all between vowels, seems always to be the shadowy representative of some departed letter. Is it then a very hazardous supposition, that in the other pronouns, *sibi*, &c. (and perhaps *quibus*, *omnibus*, &c.) the *b* was often wholly neglected in pronunciation, so that they were nothing more to the ear than *si*, *ti*, *i*, *ui*? Now *mi*, *ti*, *si*, are the very forms under which these words appear in the Roman, Spanish, and Italian languages ; and the French also at one time possessed the two first (Raynouard, p. 143). *I*, *hi*, *y*, or *hy*, became the representative of *ibi* in the same languages (Raynouard, p. 341) ; while *ubi* was reduced to one of the forms,

* We use the term *dative* solely because it is the received term, but cannot admit that the notion of *giving* is the original, or even a common meaning of that case.

o, u, or hu. The reader does not require to be told that the French still possesses *ubi* and *ibi* in the shape of *ou* and *y*. We are the more eager to establish this point, as it will enable us to dispose of a number of our procelesmatic enemies as—*sibi fie | ri, 4, 3, 4—sibi gladi | o, 5, 7, 1.*

Whether sentence of condemnation is to be passed upon the same letter in—*dabit frus | tra, 2, 1, 54—jubet fra | ter, 5, 6, 1*—and the imperatives—*jube, abi*—above mentioned, we will leave to the consideration of the reader.

The letter *c* may next be called to the bar ; and we believe that it likewise must, in certain positions, be considered equally powerless. A comparison of *facere* with *fare* Italian, and *faire* French—*oculus* with *œil*, of *tacere* with *taire*, &c. (and a hundred examples might be produced) furnish evidence that such a suspicion is within the limits of possibility. *Tacet cur | 4, 5, 5*, adds strength to the suspicion as regards the last of the three. Of the others we are content to say, that the metre will be brought nearer to the iambic rhythm if we treat *facere* as a trochee, and *oculos* as a spondee. For instance, we can then dispose of some more feet, with the long name, as *e | riperem ocul | os, &c.* The word *lacruma* again is not without suspicion, when we find such a foot as *era lacru | mas, 3, 2, 37*, and at the same time call to mind the French *larme*. To proceed with the alphabet ; the final *d* of the neuter pronouns may first be examined, as no letter is so embarrassing in Latin comedy. It may first be observed, that the letter is entirely parasitical, if we may use the word, forming no essential part of the pronouns. The pronouns *is* and *quis*, as exhibited in our grammars, are really made up of two separate declensions ; and, through this confusion, appear devoid of all analogy. Thus *is, id, ibi, in* (inter-im), *ibus*, together with *quis, quid, quem, qui* (abl.), *quibus*, and perhaps *quia* (the so called conjunction), belonging to the *i* declension, like *tristis, triste*, whereas the other cases follow the analogy of *nullus, -a, -um*, or the *o* and *a* declensions, the stems being *eo, ea, quo, qua*. As the neuter rarely takes the *s*, which marks the nominative case, the stem *tristī*, according to the general practice of the Latin language, assumed the *ē*, as an equivalent for the faint sound of a final *ī*. But before the suffix *d*, the *i* of course remained, and we have *quid, id*. That the *d* is not an essential part of these words is shown further by the neuter *idem*, derived not from *id-dem*, but *ī-dem*, whilst *is-dem* led to *īdem*, just as *qui* followed by a consonant has the long sound, which *quis* would have in the same situation, though *quis* in itself is short. The other adjective pronouns are of the *o* declension.

The nominatives masculine in *e*, *ille*, *iste*, &c. are only in appearance at variance with this declension. Thus we really meet with *ipsus*; and the suppression of the nominative sibilant exposes the unprotected short vowel to the usual fate of short final letters. The *ō* or *ū* is supplanted by *ē*. In precisely the same way we have the vocative *dominē* for *dominō*. *Illō*, *istō*, *ipsō*, *quō* would correspond to the Greek neuters *τοντο*, *το*, *δ*, *εκεινο*, &c.; but they invariably assume some suffix, an *m*, *d*, or *c*, i. e. *ce*; becoming *ipsum*, *quom*, *quum*, or *cum* (called a conjunction), or *illud*, *istud*, *quod*; or, lastly, *illuc*, *illuc*, *istoc*, *istuc*. *Quicquam*, *quicquid*, for *quidquam*, *quidquid*, are only euphonic varieties, the *c* growing out of the following *q*.

If, then, the *d* be only an unimportant suffix, not affecting the meaning as far as we can see, it can scarcely be surprising that these little pronouns should occasionally be treated as if they had no final consonant to protect them from elision, as in—2, 1, 32 *quod ad te ad* | *tinet*—2, 2, 28, *id quod ad* | *te*—3, 3, 82, *il* | *lud ad me ad* | *tinet*—5, 1, 30, *dece* | *det quod hinc*—2, 3, 8, *quid est quid*—2, 4, 17, *quid est ob* | *secro*—4, 5, 4, *quid huic hic*—3, 2, 26, *pror* | *sus quid is* | *tic*—Andr. 1, 1, 15, *et id gra* | *tum*, &c. Thirty or forty more examples might have been quoted from the *Adelphi* alone.

The particle *quidem* it is difficult to analyse; but whatever be its origin, we may safely affirm that its pronunciation did not always correspond to its written form. Bentley (Andr. 1, 3, 20) considers that the *m* is to be dropped, by which he converts the word into two short syllables, as usual. This explanation, however, fails in such cases as Ad. 4, 5, 58—*quidem in te*—and after what has been said upon the letter *d*, we shall, perhaps, not err in assigning to it the power of a monosyllable, such as *quem*. Thus *siquidem* will be a spondee, *si* preserving its quantity. So *equidem* from *eg'quidem*, and in *quandoquidem quando* retains a long *o*. Indeed as *quidem* has something of an enclitic nature in it, adding force to the word immediately preceding, it is more likely to lengthen than shorten the syllable to which it is attached. May we read in Persius, 1, 110, *Littera. Per me quidem sint omnia protinus alba*, for *per me equidem*, &c.. which, besides being suspicious in point of latinity, deprives *me* by elision of its due power? To the instances given above (p. 349), to show that *quidem* was in some way contracted, we may add—2, 4, 4, *quidem te*—3, 2, 39, and 3, 3, 25, *quidem non*—5, 5, 1, *quidem dum*. *Edepol* or *aedepol* is another word of perhaps doubtful origin. If it be a corruption of *aedem Pollucis*,

then certainly the *d* had lost its power; and the word as spoken must have been equivalent to *ēpol*, which would correspond precisely to the other interjection *ecastor*. See the following passages, in all of which *epol* would be well adapted to the metre—3, 1, 2—4, 8, 1—4, 9, 8.

Another word, which appears to possess a silent *d*, is *studet*, for in 1, 1, 48, we have *studet par* | *referre*—and in 5, 5, 2, *student face* | *re*. Bentley, on the other hand, holds both *studet* and *student*, notwithstanding the following consonants, to be pyrrhics, thus creating, in the second passage, a most delightful representative of an iamb. Some, perhaps, may propose to support the Doctor's view of the case by the form of the French verb, where these very letters, *t* and *nt* of the third persons, are no longer pronounced, as *il aime* and *ils aiment*. Let it be recollected, however, that so soon as it became the invariable custom to express the pronouns *il* and *ils*, it was a useless repetition to give utterance to the final *t* and *nt*, which had exactly the same power. In Terence the case is different.

G is the next consonant, and no consonant is so little able to maintain its position, especially when flanked by vowels. An Englishman, ignorant of the other Teutonic languages, would be surprised if he had pointed out to him all the words in his own tongue from which this guttural has vanished. In Terence *ego*, *magis*, *digitus*, *igitur*, *agere*, and others, have a very deceitful appearance. *Ego* assumed in the old Italian the form *eo*, and afterwards that of *io*, which it still retains. In no one of the languages derived from the Latin does the guttural appear. Nay, it must have disappeared (as a sound) at a very early stage of the Latin itself, if, as seems probable, the final *o* in the first person of verbs is, in fact, the pronoun. From *magis* and *mage* the Italians have derived *mai*, the French *mais*, which appears again in *ja-mais* (*jam-magis*), the Spaniards *mas*. So *magister* has led to *maistre* and *maestro*. *Digitus** corresponds to *dito*

* How much the shortened pronunciation improves the metre may be seen in the following iambic tetrameter catalectic (Eun. 2, 2, 53):—

Qui mihi nunc uno digitulo forem aperis fortunatus.

Which certainly has not much melody. But let us abbreviate the words according to the principles already stated, observing, at the same time, that there is a strong emphasis on *mihi*, in opposition to *tu*, in the next line. The two lines will run thus:—

Qui mí nunc uno dítulo | for' áp'ri' fortunátus,
Ne tú 'stam faxo cálcibus | sáp' insúltabi' frústra:

And the reader will, perhaps, detect some metrical resemblance to not the most elegant of songs:

Giovánni loves good ale an' wine,
Giovánni loves good brándy.

Italian, *doigt*, French, whilst the Greek δαχτυλός has at least undergone contraction. In Juvenal, *Strigilibus* is often produced as a specimen of a proceleusmatic in dactylic verse. The French *étrille*, however, and the Italian *stregliare* may, perhaps, authorise our pronouncing the word as *strilibus*. Again, Priscian (in the third chapter of his treatise on *accents*, speaking of the word *vigil*, *vigilis*) says, *magis videtur per syncopam proferri*; which seems to imply that the *g* might be silent, and, accordingly, we find *vigiles* (subj. of *vigilare*) the representative of a trochee in the same scene of the Eunuch, from which we have just quoted a line, where *vigiles* as an anapest would certainly offend the ear of any but a grammarian:—

Ne súrsum d'orsum cùrsites, nev' úsqu' ad lucem v'les.

The French *veiller*, and the Italian *vegliare*, confirm this. So again, *frigidus*, *freddo*, Italian, *froid*, French; *fragilis*, *frale*, Italian; *rigidus*, *roide*, French, *legere*, *lire*; *fugere*, *fuir*, French: Viginti, triginta, venti, trenta, Italian, &c., &c. That the words, *ego*, *magis*, *igitur*, certainly did suffer some contraction will appear from these references:—Ad. 2, 1, 31, Egon' de | bacchatus; 2, 1, 38, Si ego tibi il | lam, *i.e.* Syo ti 'l | lam; 2, 4, 4; 3, 2, 23; 5, 5, 16; 4, 7, 28, quid illā igi | tur, *i.e.* qu' illai | tur; 2, 3, 6, magis prin | cipem; 4, 5, 67, ni magis | te; 4, 3, 14; 4, 5, 46; 4, 5, 74. These instances of *magis* are often explained by striking off the sibilant, and thus producing so many anapests or dactyls; but the comparative of *mag(n)us*, *ma-iōr*, having itself lost the guttural, it is not unlikely that the same fate may have befallen the adverb.—See Raynouard, p. 335. With *magis* may be connected a number of other words of similar character—*minus*, *satis*, *nimis*. The first of these became in Roman *mens*, in the old Italian *men*, in French *moins*. *Satis*, in its simple form, does not appear in these languages, but from a compound *ad-satis*, they seem to have derived respectively, *assaz*, *assez*, *assai*. *Nimis*, we believe, has no modern representative. But the question, whether these three little words were in fact presented to the ear with diminished powers, must be decided by examples: 4, 3, 14, sunt minus | secundae; 5, 7, 36, minus videtis, at the beginning of a trochaic line, where *minus* must occupy the place of two short syllables, or rather one long one; 2, 1, 30, si satis | jam; 2, 2, 31, si satis | placet; 2, 3, 3, lau | dem satis | certo; 3, 2, 11, satis quae; 3, 3, 48, satin' scis (this example seems decisive); 3, 3, 85, satis cerno; 3, 4, 13, me satis | pie; 4, 4, 14, satis diu; 4, 1, 6, nimis mise | re; 5, 5, 1, nimis sanc | tas; 1, 1, 4, evenir | e ea sati | us est.

The words, *tamen*, *enim*, *neque*, *atque*, *nisi*, perhaps *quasi*, *ita*, *quia*, *modo*, &c., belong to a class of words which are scarcely entitled to any great share of the voice. Thus we find, 1, 2, 65, *tamen vix*; 2, 1, 35, *pes | tis tamen | tibi*. So the particle *tametsi* is only a contracted form of *tamenetsi*; 2, 1, 47, *verum enim quando*; 2, 3, 2, *ver | um enim ver | o*; 5, 5, 24, *enim vi | di*; *Andr. 1, 3, 1, enim ve | ro*. Bentley elides the *m.* 3, 4, 13, *neque faci | am*. Without absolutely writing *nec*, we may give the same sound to *neque* (and to *atque* that of *ac*). So *nisi* may be pronounced *ni*; and, perhaps, *quasi*, *quai*. As to *quia* and *ita*, we have to guide us, 4, 2, 27, *quia mise | ram*; 1, 1, 10, *Ego quia*; 5, 1, 41, *Ita ut volu | mus*; 5, 1, 1, *Ita ut dix | i*; and from the *Andria*, 2, 3, 25, *Itan cred | is*. *modo*, used as a particle, not having any representative in the derived languages, we must avail ourselves of the compound *quomodo*, which belongs to them all under the respective forms of—*com*, Rom., *como*, Span., *comme*, Fr., *come*, Ital. A monosyllabic form of the particle (by omission of the consonant) is well suited to the lines *Ad. 5, 1, 59, modo faci | to*; *Eun. 2, 2, 51, il | lam age modo |* and perhaps necessary in—*Andr. 2, 1, 2, modo e Dā | vo*; *Andr. 2, 4, 6, modo ut pos | sim*. The line of the *Adelphi* from which we have last quoted, has for the final iamb—*vi | dero atque |*; but then the following line begins with a vowel—*illi* &c. We are somewhat tempted to transfer the conjunction to the second line, for *atque illi* would not be a very outrageous spondee pronounced as *ac 'li*. However, this same word *atque* performs the same duty of. *συναφεια* again in 3, 3, 21, 22; and a third time in 3, 4, 19, 20.

A few stragglers must be brought up, and we shall have done. The little word *esse* (frequently no more than an enclitic) naturally admits of abbreviation as 5, 5, 8, *Id esse* for a trochee. So *erit* cannot always be pronounced in the received manner. It seems sometimes to require the sound of *er't*, just as we find *est*, *volt*, *fert*, for *esit*, *volit*, *ferit*. That the sound of the word was in some way incomplete can scarcely admit of doubt, when we find such feet as:—*Prol. 4, se ipse erit; | vos eri | tis*; 2, 1, 26, *fecis | se erit meli | us*; 3, 3, 57, *sper | o erit simi | lis*. The greatest metrical difficulty in the whole play is perhaps to be found in 1, 2, 37, *amat dabi | tur*. That *dabitur* may possibly constitute a trochee we have already mentioned in treating of the letter *b*; and it is also possible that the final *t* of *amat* may not require to be sounded before a consonant so closely allied to it as *d*. But these more violent elisions,

as Bentley has pointed out, are only met with at the beginning of lines ; whilst, on the contrary, it may be observed that contractions freely allowed in the other parts of a verse are less admissible at the close of a line.

The words *apud*, *domi* ; *senex*, *senectus* ; *pater*, *soror*, may occasion difficulty, unless we are prepared to contract or shorten them in some way. The analogy of *père* and *sœur* seems to explain the two last ; but *domi* and *apud* cannot be illustrated in the same way. The reader may form his own opinion of them from the following references—2, 1, 44, *domo me* ; 3, 3, 35, *est domi ha | biturus* ; 3, 3, 59, *domi habu | it* ; 4, 5, 39, *domi vir | ginem* ; 4, 7, 28, *faci | as domi | erit pro | &c.* (perhaps *dom | y er't*) ; 4, 7, 28, *domus sump | tuosa* : whilst on the contrary, in 2, 4, 22, we find *dōmūm | cum obsonio*—and for *aput*, 1, 2, 74 ; 3, 3, 50 ; 3, 5, 2 ; 4, 1, 1 ; 4, 1, 19 ; 4, 2, 34 ; together with 4, 2, 44 ; 5, 1, 13 ; 5, 2, 19. With regard to *senex* and *senectus*, as they are found in 4, 8, 6, *senex nos | ter*, and 5, 1, 47, *viti | um senec | tus*, we may perhaps deduce the true explanation from the form of the genitive *senis*, or the comparative *senior*, so that the *ec* in these words should be disregarded. Thus we should have something like *Sen' nos | ter* and *viti | um sen' | tus*. It is in accordance with this that we find *senectus* as a participle of the verb *seneo*. Lastly, is the adjective *sentus*, a reduced form of *senectus* ?

It has been objected to a system of evanescent letters, to which we have referred so many of the metrical difficulties occurring in Terence, that if these words were so pronounced in one passage of an author, they must have the same power in other passages, and that letters which are not to be sounded in Terence, must be treated in the same way in Virgil. It is a sufficient answer to refer the reader to his own language ; where he will find numerous instances of words, which in one passage are pronounced fully, and in another lose a whole syllable. And secondly, those licences and contractions which are so common in the language of conversation, are not suited to the dignified and slow delivery of the tragic or epic muse. Indeed, the term *licence* is incorrect. It would, on the contrary, be a greater licence, it would be mere solemn absurdity, to pronounce distinctly every separate syllable in a common dialogue.

We have carried this article to a much greater length than we had intended ; and yet there are perhaps some few lines of the *Adelphi* left unnoticed, in which the principles we have contended for may not be found sufficient. But we must pass them over at any rate for the present. Though we

have more particularly examined one play of Terence, yet what we have said will apply to the others; and we believe that but few iambic or trochaic verses in them will occasion much difficulty to those for whom we are writing—industrious students.

[HARRIS'S BOOKS.]

IN the days of early infancy, long ere scholastic labours have infringed upon the liberty of the future student, he is surrounded by the tattered remnants of those gay pictured books, which are continually issuing from the press at the corner of St. Paul's Churchyard, for the amusement, if not for the edification, of the rising generation. 'Harris's books' are, therefore, associated with the first pleasures of childhood; and 'Dame Trot and her Cat,' 'The History of the House that Jack built,' and other similar productions, notwithstanding the 'march of intellect,' still triumphantly retain their station in the nursery.

Although these erudite works continue to find a place in the catalogue of the above respectable publisher, and although no inconsiderable proportion of his numerous publications is devoted merely to entertaining narratives, adapted to progressive ages from infancy to youth, still amusement does not hold her reign in this juvenile library to the exclusion of more substantial and useful objects; but instruction, too, is combined with its lighter and more attractive partner.

An inspection of Mr. Harris's catalogue cannot fail to afford satisfaction to the judicious preceptor. The design of many of the works which it contains is most excellent, and their titles induce a belief that they will prove a rich accession to the means of imparting useful knowledge. But an examination of the works themselves, conducted with every expectation of deriving profit and pleasure from their perusal, produces in us a feeling of disappointment, arising from the insufficient amount of talent which is in general displayed in their execution.

We cannot but regret that so few writers of really sound judgment and competent knowledge are led to devote their attention to this most important branch of literature. It may be that, as every subject is apparently engrossed by the crowd of works which are constantly published for the benefit of young people, the modesty of real talent retires from the contest, deeming it presumption to treat on what has been

already discussed by others of supposed experience. Thus the field continues too much in the occupation of commonplace minds, who, with every disposition to do what is most rational, and most conducive to the proper instruction of youth, only contemplate things in the detail, and appear little qualified to take an adequate view of the true end of all education.

To expose the errors of conceited ignorance, or to condemn the dogmas of presumptuous prejudice, would be to some an easy and, perhaps, not altogether an unpleasing office. But to speak in any terms, save those of commendation, of works which are dictated by praiseworthy motives, is indeed an ungracious task: nor can we too gently point out those defects of style and manner, which only render information thus clothed less attractive, and, therefore, less useful; reserving our graver disapprobation for that inability which gives imperfect and confused ideas of a subject, and bestowing our severest censure only on those faults which would instil false and pernicious notions into the tender mind.

An attempt* has been made in a former number to show how materially history may, by an able writer, be made to assist in the formation of character, by offering to the contemplation of youth a comprehensive view of human nature, and of the motives which should actuate man in his journey through life; thus inciting to all that is great and good, and tending to exalt the character by purifying the heart.

Several histories of our own country appear in the catalogue now before us; but in vain we seek in them for those enlarged views and that impartial narrative which are so essential to the usefulness of historical works, and without which they must, in fact, be pernicious.

One is at a loss to conceive why so meagre a performance as the *History of England*, by the Rev. Mr. Cooper, should be in so great request as to have reached the twenty-first edition—a result which we should only have thought probable in the absence of all other historical notices of this kingdom.

In this work the two last reigns, those of George the Third and Fourth, occupy more than half the volume. Two or three pages are all that are usually allotted to each of the preceding reigns, and nearly a third of this small space is engrossed in summing up the character and personal endowments of the prince, whose good or bad qualities cannot be in the least deduced from the short list of events by which their enumeration is preceded; the pupil is therefore taught to believe, on

* Second Number, Art. ' Darton and Harvey's books.'

the authority of the Rev. Mr. Cooper alone, without any facts being brought forward in support of the assertion, that one prince was ‘brutally cruel and vindictive, perfidious, lewd, perjured, and rapacious’—p. 49; that another was ‘temperate, modest, and devout;’ and that a third was ‘courteous, affable, and eloquent.’ Should not an author consider it rather a responsible office thus to impress on the youthful mind a bias, which, perhaps, no after perusal of history may totally eradicate?

The character of Charles the Second, that personification of all that is vicious in man, and despicable in royalty, is thus laid down, without one action of Charles being recorded to exemplify a single attribute with which he is here invested:

‘Charles the Second was in his person tall and swarthy; and his countenance was marked with strong, harsh lineaments. His penetration was keen, his judgment clear, his understanding extensive, his conversation lively and entertaining, and he possessed the talent of wit and ridicule. He was easy of access, polite, and affable. Had he been limited to a private station, he would have passed for the most agreeable and best natured man of the age in which he lived. His greatest enemies allow him to have been a civil husband, an affectionate father, and an indulgent master; even as a prince, he manifested an aversion to cruelty and injustice. Yet these good qualities were more than overbalanced by his weakness and defects. He was a scoffer at religion and a libertine in his morals; careless, indolent, profuse, abandoned to effeminate pleasure, incapable of any noble enterprise, a stranger to manly friendship and gratitude, deaf to the voice of honour, blind to the allurements of glory, and, in a word, wholly destitute of every active virtue.’—p. 83.

Are children, then, to be told that the dark shades of the picture are only *weakness* and *defects*? What right-feeling parents would not turn from the temporising historian with indignant warmth, and endeavour to shield their children from the benumbing influence of worldly precept, by giving to vice and hypocrisy their right names?

Wolsey, who made so conspicuous a figure in the reign of Henry the Eighth, is here mentioned but twice, and then only incidentally. We are told that by his ‘assistance, Henry, in 1533, divorced Catherine of Arragon.’ Now this is quite a new version of the fact, as all authorities extant are, we believe, agreed, that to Wolsey’s vacillating conduct in that affair, his own ruin must be ascribed.

In the concluding reigns, impartiality and moderation are attempted, but the anti-catholic spirit of the author too plainly, and on more than one occasion, is exhibited. In speaking of the ministry of Mr. Canning, the historian thus remarks:—

‘The admission of the Roman Catholics into power was the price of their support; and all true Protestants saw with horror, that their rights were about to be compromised.’—p. 229.

The table of remarkable events appended to each reign is a very useful addition to this history.

The History of England, by Mrs. Helme, has already reached the seventh edition, and is much used in establishments for the education of young ladies. The style and machinery of this work cannot be commended. The conversations of the young people are stiff and unnatural, so that children who are accustomed to form their own opinion of what they read, are at the very commencement irresistibly impelled to ridicule the formal little folks, and are therefore disqualified from going into the matter of the history with feelings of much respect for the author. The observations of the children are merely interruptions, having nothing original to recommend them, and only serving to elicit a common-place remark, while occasions for moralising are dragged forward in a manner almost ludicrous. In the reign of Alfred, the conduct of the cow-herd’s wife affords an opportunity for inculcating good manners. ‘Grossness of manners,’ said Mrs. Wilmot, ‘ought to be carefully guarded against, for the most handsome person, or the most learned, without the necessary knowledge of what is due to the customs of society, appears disgusting; but when united, they render the possessor doubly estimable, and his or her company eagerly sought after.’—p. 21.

On the other hand, not only are legitimate occasions for enforcing moral lessons frequently disregarded, but sometimes indeed those actions are excused, which should call forth the pointed disapprobation of every well principled mind. The attack made on Copenhagen, by the British fleet in 1807, is thus commented upon by this historian for youth:—

‘Though, on a superficial view, this measure may appear harsh, and the humane heart revolt when it contemplates the miseries of unoffending individuals; yet when it is considered, that no barbarous thirst for revenge, nor wild ambitious scheme of aggrandizement, prompted the action, but, on the contrary, that it most assuredly was planned as a preventive for greater evils; then, while we cannot restrain the tear of pity, we must needs say, that nought but folly or faction could arraign its wisdom.’—p. 318.

Buonaparte, of course, falls under the unmitigated displeasure of this lady, and invention is exhausted in applying epithets. ‘The infuriate usurper’—‘recreant ex-emperor’—‘daring re-

bel,' and other similar vituperative titles, might induce a belief that the fair author had, to supply her own deficiency in a not very feminine accomplishment, borrowed a page from a work which made some noise in its day, under the title of 'Cursing Made Easy, by Dr. Slop.' The term *radical* is luminously explained, as being applicable to a man who wishes for 'annual parliaments, universal suffrage, and election by ballot.' Is it probable, that any one of these wishes, thus expressed, can be understood by a child? There remains, however, a much graver objection to this book than the want of a clear exposition of the term *radical*, which perhaps had been better altogether omitted, as being a ridiculous epithet used in the temporary excitement of party feeling.

In the reign of the vicious Henry the Eighth, events and accusations are noticed, which an historian, and more especially a female historian, writing for the benefit of youth, should have entirely passed over in silence. They are alike offensive to decency and morality, and every careful mother would avoid placing any book, in which the slightest allusion is made to them, in the hands of her children.

This objection applies with tenfold force to Dymock's Abridgment of Goldsmith's History, rendering it, independent of other glaring faults with which it abounds, a most improper book to be employed for the purposes of education. In other respects, neither the manner nor matter of this work can be approved; it is not only written in a bad style, but with a strong party spirit, by which every fact is distorted. Better would it be that children should remain wholly ignorant of the history of their country, than that they should obtain an acquaintance with it through such a medium.

When we find that the volume before us is a standard school-book, ranking, together with the two just noticed, among works of such extensive sale, as to be printed for the joint advantage of some of the most respectable publishers in London, we feel yet more forcibly how requisite it is, that parents should be aware of the contents of books which are used in forming the minds of their children.

The latter part of the history must of course be wholly attributed to Mr. Dymock, and for *this* he is therefore more peculiarly answerable. Characters, whose political opinions are at variance with his own, are generally noticed with contempt or vituperation. He thus notices that act of the Lord Mayor Beckford, for which his fellow citizens caused his statue to be erected in their Guildhall, with that intrepid rejoinder inscribed on its base, which, contrary indeed to

courtly etiquette, but with so much manliness and propriety, he returned to the ungracious reply of the king :—

‘ At the prorogation of Parliament, the city of London petitioned for a change of ministry, and the royal answer not being satisfactory, one Beckford, then Lord Mayor, had the audacity to give a personal reproof to his Sovereign, for listening to what he rudely called unconstitutional counsel. The Monarch, in silent indignation, heard the reproof of this insolent citizen, who had amassed great wealth as a West India planter, of which his arrogance was probably the spawn, conjoined with ignorance of what was due to the august personage, in whose presence he had the honour to stand.’—p. 318.

That enlightened statesman, the late Mr. Whitbread, who occupied so distinguished a station in the parliamentary history of this country, during a long and eventful period, has his character flippantly dismissed in the following paragraph :—

‘ The trial of Lord Melville commenced on the 29th of April, in Westminster Hall, and was conducted on the part of the Commons of Britain, by Mr. Samuel Whitbread, a brewer in London, who framed the articles of impeachment, ten in number, injudiciously. The superabundance of his zeal formed but a poor compensation for want of precision and judgment. To aggravate the guilt of the defendant, as Whitbread vainly imagined, he frequently introduced the same charge in different articles; and not to render the articles too numerous, he huddled together different charges in the same article. These errors and defects, the result of a feeble understanding, and of acrimonious violence, would have operated in favour of the noble lord.’—p. 400.

Examples of this kind might be multiplied, but these are perhaps sufficient to prove the gross partiality shown in this work. Stronger objections exist against the fitness of this volume for occupying the minds of children. That event, which, in the last reign, cast so black a shade over the domestic history of royalty, and which was so revolting in its detail, that all allusion to it should have been studiously withheld in a work for juvenile readers, is here made a subject of free discussion. Some of the questions, placed at the end of the work, to which the pupils are expected to furnish answers from their recollection of the text, will sufficiently show the nature of the information which is to be instilled into the youthful mind :—

‘ In what year did a separation take place between the prince and princess of Wales? Why were commissioners appointed to examine into her conduct, and in what year? What was the report of the commissioners? In what year had a previous inquiry taken place, and by what name was it called? Who merited blame for the letters which the princess wrote to their majesties and others? ’

When did parliament vote her 35,000*l.* a-year? What followed? Where did she at last settle? What annual sum did the ministry offer to prevent her return to Britain? Did she accept that proposal? How was she received by the populace in London? What measure did her arrival in Britain render inevitable? Relate her trial and her conduct at the coronation. By whom was she now deserted? Respecting what did she form an erroneous opinion? What would a little penetration have discovered? What did her friends regret? By whom were addresses forwarded to the sovereign? In what respect did the opinions of the uninformed part of the public and of the higher circles differ? Were the declarations and conduct of the whigs consistent? Who advised the suppression of the queen's name in the liturgy? What sum a-year did the premier propose to allow her? What declaration did she and her legal adviser, Mr. Brougham, make with respect to it? By what act did she give the lie to these declarations? When did she die? What happened at her funeral before she left London? Who now rose in the esteem of the nation?—p. 491.

Who would wish their children, by qualifying themselves for answering these questions, to be initiated into such kinds of knowledge—to be familiarized with subjects whose tendency is at once so depraving and so humiliating to human nature?

A work entitled 'True Stories from English History,' is not executed with great ability, but with such an evident disposition to be useful, and with so much amiable feeling, that it is impossible to mention the errors which are to be found in this book, with any intention save that of pointing them out for future correction.

In the reign of Edward the Second we find this passage:—

'All was now turbulence; some of the nobles took up arms; the king's mother, Isabella, joined against him.'

Again—

'His mother then summoned a council at Westminster, by which her son was deposed, her grandson chosen for the new king, and she herself made regent or governor of England.'

'This is a sad history of female ambition and cruelty. To the honour of woman be it said, there are few such women, still fewer such mothers as Isabella.'—p. 75.

From what cause could this strange mistake arise? If the word *mother* instead of *wife* occurred but once, we might suppose it to be an error of the press, but as it is repeated, a different reason must be sought for the mis-statement.

The author of this work is not, perhaps, sufficiently acquainted with leading events, as related by writers of opposite opinions; and although it is certainly not necessary that an historian who writes for the information of youth

should be a profound politician, it is surely not right to give unmeasured praise to a line of policy of which no explanation or description is attempted, and which, in the present day, is somewhat more than questioned:—

‘ Were success always attendant on merit, or proportionate to desert, Mr. Pitt would have placed England at the pinnacle of happiness and fame. But, to the irreparable loss of his country, he died, ere all his plans were completed, or all his wishes realized.’—p. 206.

Much chit-chat information has been gleaned by this indefatigable writer, but it is so heterogeneous and so ill arranged, that the reader is at a loss to imaging by what rule such different kinds of notices were inserted in their present respective situations. One passage appended to, but certainly not belonging to, the reign of Edward the Fourth, will suffice to exemplify this observation. Immediately after observing that the art of printing had been recently invented, the author thus continues:—

‘ The cruel sport of spinning cock-chasers was common among the ancient Greeks. Aristophanes speaks of it in his curious comedy, “The Clouds.” The Grecian boys were less cruel than ours, for, instead of thrusting a pin through the poor insect, they only bound a thread about its legs. These may-flies are a kind of beetle found among the flowers of hemlock; and no doubt many children play with them from ignorance of the sufferings they cause. Every body should take all opportunities of explaining to the young that it is the cruel torture which the chafer suffers that causes its flutterings and writhings. Surely no child understanding this would ever again torment this unoffending insect.

‘ The paper kite obtained its name, perhaps, from having originally been made somewhat in the shape of that bird. This was an ancient pastime, and was known in China in very early times. The *cerf volant* is named in a French dictionary of A.D. 1690.

‘ The Grecian children were very fond of blind-man’s-buff, anciently called in England hood-man-blind, from the persons being blinded by the hoods then generally worn.’—p. 115.

The same author has likewise written ‘True Stories from Ancient History,’ a work which has already reached the sixth edition. This book has the same faults of style as the preceding; it is in some parts colloquial, approaching to vulgarity. For example—

‘ Codrus went in disguise into the enemy’s camp, and picked a quarrel with one of the soldiers.’—p. 31.

‘ By the by, this is the most ancient treaty recorded in history.’—p. 33.

Comments made on events and characters are chiefly interjectional and parenthetical, and we might add are, per-

haps, sometimes rather absurd. After detailing that strange story of Seleucus resigning his own wife to be the bride of his son Antiochus—a proof of paternal love certainly not at all in unison with modern feelings and manners—the narrative concludes with the exclamation, ‘What will not parents sacrifice for their children!’ Again—

‘Catiline, envying and hating Cicero (how inseparable are envy and hatred!) resolved to dispatch him as a first step towards advancement.’—‘Each of the Triumviri consented (to his shame!) to sacrifice his best friend.’

These are, however, only faults of manner, and this writer certainly has claims upon the attention of youth, into whose hands her books may be placed, at least, with safety. The following extract evinces just sentiments :

‘Here I must request you to reflect on the degree of reliance that is to be placed on all historical accounts. * * * * * I press this upon your attention, because I would not have you hastily believe improbable and extraordinary incidents; because I would not have you indiscriminately credit those hideous stories of vice and cruelty so frequently detailed. When we hear of wicked tyrants, whilst we hate the crimes laid to their charge, let us remember that it is possible those crimes were never committed by them * * * * *.—p. 278.

‘True Stories from Modern History,’ by the author of the two preceding volumes, are characterised by the like peculiarities. In this work each of the sovereigns of England again forms the subject of a separate story. The writer is not happy in her explanation of the English constitution. The parliament is here described as

‘An assembly consisting of three estates; that is, the lords temporal (dukes and earls, &c.); the lords spiritual (archbishops and bishops); and the commons or gentlemen. The king is deemed the head of all, and sits on a throne in the House of Lords.’—p. 86.

We had marked out several passages illustrative of the feebleness of style which is conspicuous in this lady’s works, but cannot allow ourselves space for further extracts.

A small volume, entitled ‘Stories from the History of France,’ is well arranged, and well calculated to catch the attention of very young readers. The story of ‘The Prisoner of the Bastile’ is so naturally told as to be painfully interesting. Perhaps the writer is somewhat too partial to royalty, and would give too wide a scope to the political maxim that kings can do no wrong.

Some simple account of the history of Ireland has long been a desideratum in the historical branch of education. The

pupil has hitherto received only vague and confused notions of the progress of that interesting and unfortunate country ; which have been gleaned from the pages of English history, where facts relating to the Sister Kingdom are too often distorted by party spirit, or religious prejudice. This void is at length filled by a small work entitled 'Outlines of Irish History,' wherein events are impartially narrated in a clear and simple manner. The writer is no partisan ; and while he freely comments on the injustice of fettering Catholics with disqualifications on account of religious opinions, he speaks without reserve of the cruelties and lawless conduct of the rebels.

In no branch of education has so marked an improvement taken place as in that which relates to geography. The method of indicating the situations of places, by the aid of blank maps, affords one certain criterion of the progress of the pupil, provided the nature of a map be well understood by him ; and if this plan of instruction be adopted, scarcely more is wanted to assist an intelligent preceptor in teaching the position of places than two good sets of maps, corresponding with each other in every respect, except that the one has the different parts merely outlined, while the other has the names of places inserted.

The Abbé Gaultier has furnished a most elaborate work on the above plan, and has invested it with attractions, which give to this mode of acquiring geographical information, the appearance rather of an amusement than of a study. This knowledge is impressed on the mind by means of a game in which many pupils may at the same time be advantageously engaged.

The first part of the work consists of numerous questions with their answers, which are numbered and divided into lessons. An atlas, with two sets of maps, as above described, is subjoined. Boxes of counters are provided, having a question written on each counter, and a number corresponding to that of a similar question in the book. When the pupils, after reading any particular lessons, and consulting the maps with attention, are supposed to have become sufficiently acquainted with the answers, the counters which have reference to these lessons are placed in a bag, whence they are drawn at hazard by the scholars in rotation. If a correct reply be given to a question, and the situation of the place to which it relates be indicated on the blank map, the pupil is rewarded by receiving a certain number of plain counters ; but if he fail to give a satisfactory answer, he is obliged to pay in the same coin for the information supplied either by one of the

other pupils, or by the instructor himself. He who, at the end of the game, possesses the greatest number of counters, is entitled to certain privileges and honours in the succeeding game. Thus all are on the alert; and the ready memories and quick eyes of the youthful players are soon successfully exerted.

To the first part of this work unqualified praise can be given; but the second part is not perhaps so free from objection. This consists of a concise treatise on the artificial sphere; but the definitions are not, we think, clearly given, and the problems are shown without any attempt at explanation. The eighth definition is particularly obscure:

‘A *circle* in general is a curved line, called the circumference, returning upon itself with a point in the middle, called *the centre*.’—p. 25.

To discover what this really means requires a previous knowledge of the nature of a circle.

The third part contains numerous

‘Geographical questions in the manner of a game, for enabling THE PUPILS to find out a place by means of its CHARACTERISTIC or DISTINGUISHING MARKS, designed to excite a recollection of what he has learnt of geography and history, by making him reason, combine, and reflect on it, and, by thus enlarging his MIND, to accustom him early to the ready application and exercise of his judgment.’—p. 30.

This is an excellent idea, and may be pursued to a certain extent with great advantage; but the plan appears too diffuse. The whole is divided into twenty-four sections, containing all together two thousand three hundred and fifty-eight questions. Some of these are perhaps frivolous, and others not at all useful, and are therefore calculated, in the hands of an injudicious teacher, to give that superficial knowledge which engenders pedantry, and which too often usurps the place of more solid attainments. A selection from the questions might, however, prove a valuable addition to the means of rational instruction.

A ‘Familiar Introduction to Geography,’ by the same author, is recommended by him as an initiatory book on the subject. We do not, however, think the work sufficiently simple for this purpose, as even some of the definitions may, perhaps, be found too abstruse. The general division of the earth is thus explained:

‘The constituent parts of the earth are *land* and *water*, which form a spherical or globular body, the circumference of which is computed to be about twenty-five thousand miles.’—p. 4.

Now there are at least four of these terms which a child, when he first begins his geographical studies, cannot be expected to understand. This is the besetting fault of most books of geography avowedly written for the use of children. 'Geography for Children,' translated from the French of Abbé Lenglet du Fresnoy, is liable to the same objection. The second question is, 'What are the chief constituent parts of the globe?' The information in this latter work is, however, in general given in a plain and simple manner. The method of acquiring geography, by studying the map as here recommended to grown up students, may be likewise advantageously pursued in the tuition of children; it is surely a much more rational mode to become thus acquainted with the answers than to learn them by rote.

A very prevalent plan in most elementary works on geography is to give a concise character of each nation at the end of the description of their country; this has always appeared to us as rather bordering on the ludicrous, and as being a custom better honoured in the breach than in the observance. National prejudices come in general soon enough without being awakened thus early by unfounded and arbitrary distinctions.

The work before us is faulty in omitting some information, and in giving incorrect statements on other points. Demerara and Berbice, which form so large a portion of Guiana, are not noticed. The Greek islands (1829) are still represented as being under the Turkish sway, and St. Lucia and Tobago are included among French possessions. But the particulars of different countries and of the English counties especially, which are contained in the notes, will be found very useful. The latter part, on the use of the globes, we consider deficient, inasmuch as the pupils are directed blindfold, without any attempt being made at explanation.

A small volume, entitled 'Astronomical Conversations for Children,' is recommended by the excellent and simple nature of its explanations, whereby, without the use of any terms with which a child is supposed to be unacquainted, the globular shape of the earth is satisfactorily proved, the cause of the variation of the seasons is simply shown, and a clear and well defined idea is given of the whole of the solar system. This book contains some very useful and well executed diagrams, which essentially assist in giving an accurate idea of the relative magnitudes of the planets, and of the respective distances of their satellites.

'The Little Traveller,' the subject of which is a general and particular description of the world, is a well designed,

but not equally well executed work. The attempt at explaining the astronomical part is so confused and obscure, that it makes us appreciate still more the lucid manner adopted in the little work which has just been mentioned.

'Scenes in Europe, Asia, Africa, and America,' each division forming a separate volume, have the same purport as the preceding book, but they are of a more lively cast. These, as well as scenes in England, are written by the Rev. Isaac Taylor of Ongar, a most indefatigable and zealous labourer for the juvenile library, all whose works have been uniformly received with so much favour by the public as speedily to pass through many editions.

Where the conception appears so judicious, it is to be regretted that more skill in style and manner has not been displayed. The volumes before us contain some amusing information; but they are executed with so little taste and talent, that it is matter of some surprise how they should have obtained so much favour.

The attempts at versification are for the most part such grotesque failures, that they certainly are not calculated to awaken or to foster in the youthful reader a correct taste for the beauties of poetry. To illustrate what we have advanced, it may, perhaps, be right to give one or two short extracts, taken almost indiscriminately from some of the volumes:

' Yet to send my dear wife and my daughters away
 When a friend comes to see me, I think rather rude;
 Unless they were slatterns, or would not be good,
 I'd rather, in such a case, tell them to stay,
 Since female society, temperate and gay,
 Would heighten our converse, like spice to our food.'

Scenes in Asia, p. 93.

' FORSAKING FRIENDS IN DISTRESS.

' When any one, even a woman, is in danger of being drowned, they do not try to help her, but are so terrified that they all run away, or perhaps even throw stones at her to kill her outright.

I.

' A friend in need
 'S a friend indeed;
 But there's a pretty fellow,
 Who, when his wife
 Must lose her life,
 Can only run and bellow.

' A man of heart
 Would act a part,
 I think, the just contrary;
 If she splashed in
 He would not grin,
 But say, "I'll help thee, Mary."

II.

' That man's no man
 Whoever can
 In danger fly,—inhuman !

I'd yield my help
To boy or whelp,
Much more would I to woman.'

Scenes in Africa, 4th edit. p. 83.

We forbear all reference to the other volumes for further extracts; enough has been shown, we think, to excite astonishment that these works should find a place on the same shelf with volumes which bear the name of Aikin, Edgeworth, or Hack.

Mr. Taylor has likewise written 'Scenes of British Wealth' and 'Scenes of Commerce, or where does it come from?' The latter is a good idea; and as the author does not here indulge in his poetic vein, the work is of a superior cast to those from which the preceding extracts have been taken. Great want of judgment is, however, shown in the mechanism and arrangement; too much heterogeneous information is crowded into a small space, and the puerile prelude to some of the explanations is often out of all proportion longer than the explanation itself. The latter half of the volume does not answer to its title, and therefore it would perhaps have been more advantageous in every respect if this portion had formed a separate work. When numerous subjects are treated of in one volume, children become confused or fatigued with the multiplicity, and do not retain clear ideas of what they read. The descriptions given in this book of various processes are not particularly well explained, while the incorrectness of style renders the account still more confused. The explanation of the manner of conducting the process of distillation, at p. 68, is liable to this objection.

A familiar, gossiping style is often adopted by writers for children, but no small degree of skill is required to prevent this from degenerating into vulgarity. The style of the volume now under notice is not exempt from this defect. At page 129 we find the following passage:—

'Servants who obtain their ladies' cast off dresses think themselves fine when thus bedizened, and many girls in middle life, whose accompaniments are not of a piece with such an article of finery, flaunt away half their pocket-money on their heads.'

Again:—

'We export our own chintz more than we receive by great odds.'

—p. 157.

Many other examples might be quoted, but we forbear, and proceed to notice slightly some of the other works of the same author.

'The Mine' and 'The Ship,' forming the two first volumes of a series entitled 'The Little Library,' are likewise the

productions of the Rev. Isaac Taylor. These partake of the same good and bad qualities which characterize all the works of this gentleman—good in design, but faulty in execution. A vast stock of information is amassed, but it is not put forth in an attractive form, while it would be impossible to understand some of the descriptions without being previously acquainted with subjects treated in so vague and confused a manner. For example:—

‘ In many places there are waters in smaller or larger pools. These are fully impregnated with particles of pure copper; indeed, the purest copper is obtained from these waters. James was eager to see how this was done, and found that the water is pumped up into pits made on purpose for this operation. Then plates and pieces of iron are placed in them and left. The acid which had dissolved the copper, and holds it in solution, having a stronger desire for iron (a stronger affinity chemists call it), seizes on it, and lets go the infinitely small particles of copper, which instantly fasten themselves on the iron. But the iron itself is soon dissolved by the acid and falls down in a yellowish powder, leaving the copper in its place, and in exactly the same shape as the iron in whose room it has been deposited, so that the common people say and believe the iron has been changed into copper. Sometimes they take these pieces of iron out of the water and carefully scrape the copper off them.’—p. 72.

Here is a mysterious conjuration, said to be effected by ‘the acid,’ to which the reader has not the slightest introduction till it is brought forward to perform so conspicuous a part; but all powerful as this agent is, it certainly has not the wonderful property, in the act of passing into combination from one metal to the other, of causing the copper to assume the same form as that of those pieces of iron previous to their solution, which after being here described as dissolved, are afterwards said to be sometimes taken out of the water and scraped. The same objection of want of perspicuity is found at p. 84, in the description of the manner of feeding the smelting furnace, and at p. 86 in the account of a blast furnace.

Influenced by the desire of treating difficult subjects in a plain and familiar manner, the author is sometimes led, for the sake of illustration, to make use of homely similes, which unfortunately, however, are not recommended even by the faintest resemblance. At p. 187, we find this passage.

‘ Since philosophic men have given due consideration to the structure of the earth, so as to form geology into a science, it is perceived that the surface, if it may be so called, to as great a depth as man has been able to penetrate, is composed of layers or strata of different substances placed one over another, like the flakes of a good

pie-crust ; and if it were a plum pie, the bumps in it would represent the hills and mountains..... Now let us suppose, that by Betty's carelessness a flat iron or something as heavy, had fallen upon the pie-crust above supposed, and had broken it down in some places, and forced it up in others. The flakiness of the crust would still continue, though the parts which once joined would be now widely separated. This then would much resemble the crust of our earth.'—pp. 187, 188.

After reading this, let not the little lovers of plum pie fancy, while they are demolishing its fragile and homogeneous surface, that they are becoming better acquainted with the internal structure of the earth. There could not, in every respect, be a more inapplicable comparison.

'The Forest,' by Mr. Jeffreys Taylor, is another volume of the Little Library, in design and manner very similar to the foregoing. The information which has been collected is not well arranged, the mode of introducing it is perhaps forced, and the descriptions given are not sufficiently lucid. We have not space for more than one short extract from this volume, which will afford an example of the latter defect.

'A pine tree is a sort of cask of turpentine, which may be tapped in any of the summer months.... Turpentine when reduced to dryness, leaves *resin*; but when violently stirred as it boils with water, it forms *white* or *yellow resin*.'—p. 67.

'Parlour Commentaries on the Constitution and Laws of England,' by the same author, is written with so much good humour, and the desire of imparting knowledge in a pleasing form is so apparent throughout, that we cannot any longer pursue the ungrateful task of pointing out faults in manner, and will forbear from offering examples from a work which is perhaps sufficiently open to verbal criticism.

We turn with pleasure to another volume of the Little Library, entitled 'The Garden,' to which we can give a higher degree of praise, than we have been able to offer to any which have preceded it in the same series. The pursuits connected with a garden afford to young people healthful exercise, and rational amusement ; and while serving as a seasonable relief from more sedentary, and more serious occupations, they engender a love of nature, and foster a taste for simple and pure pleasures, in preference to those artificial and adventitious excitements of society, which too often lead the mind to frivolity or vice. The proper degree of consequence which should be attached to this pleasing employment is well defined in the small volume before us.

'I have several times, I think, in my letters alluded to the useful-

ness of gardening, as an amusement in inculcating a love of industry, order, and neatness ; but I trust you will forgive my repeating what I remember to have said before, that I never wished to persuade you that it is the most important of occupations. I could quote what many great, and what is more, many good men have said with respect to gardening, as an amusement fitted for good men. I shall, when I see you, tell you some stories of the love of great men for the pursuit itself. One of the greatest that ever lived in England, I mean Lord Bacon, loved and pursued gardening with delight, and in its pursuit made some of the experiments, and learned that habit of examination which has made him celebrated in every age.'

—p. 159.

The youthful labourers in the gardens are generally very fluctuating in their industry : having no well defined end in view, they want method in their exertions ; it is therefore very desirable that they should have some familiar manual to which they may refer. This little book is calculated not only to impart a love for gardening, but at the same time to afford ample means of following the pursuit with interest and advantage. Good practical directions are here given, in a manner peculiarly adapted to excite the attention, and rouse the active imitation of the young reader. The information is conveyed in a juvenile correspondence so naturally sustained, as to induce the conviction, that the advice in each particular case must be the result of personal experience.

Among the publications which fall within the present inquiry, biography has not been neglected as a means of instruction, as well as of amusement. The Rev. Isaac Taylor has largely contributed to the stock of juvenile works in this department of literature, in three volumes of European, and two of British biography, containing collectively the lives of two hundred celebrated characters. These are written impartially, but are not set off by the graces of style and manner. We have, however, already given our opinion at large on this gentleman's writings, and will not dwell more particularly on the present volumes.

Our attention is now claimed by another work, entitled 'Triumphs of Genius and Perseverance, by Elizabeth Strutt.' This volume has considerable merit ; the characters whose histories are here told, as well as the incidents by which they are illustrated, are admirably selected. The style is perhaps occasionally rather involved and careless, but these are defects of little moment, which are entirely lost in the interest excited by the different narratives.

The unabated energy with which men of high intellectual endowments, unappalled by circumstances apparently the most unpromising, and difficulties the most disheartening, have still

struggled onwards in their pursuit of knowledge, is here well pourtrayed. The perusal must surely, for a brief space at least, rouse to attention the most dormant mind, while it must cause the same chord to vibrate in a kindred spirit, inciting him on to renewed exertions in the rich territory of intellect. The author in her preface observes most truly that

‘ There is no situation in life so high that must not, after all, owe its purest enjoyments to feelings with which mind is connected ; there is none so low which may not be cheered and refined from the same source. Independent of all worldly considerations, mental pursuits invariably bestow a rich reward on their votary in the delight attendant on their cultivation, and the temporary oblivion at least of all anxious cares in the abstraction they require.’—p. viii.

Connected accounts of voyages or travels form the subjects of comparatively but few among the numerous books of Harris with which we are surrounded.

We have read with pleasure a volume entitled ‘ Fruits of Enterprise exhibited in the Travels of Belzoni in Egypt.’ This is very superior to a mere abridgment. All that is calculated to attract and please the youthful reader in the larger work is here happily condensed and blended, in the most appropriate language, with natural and sensible remarks. This book is of that description which is most desirable to be put into the hands of the young in the hours allotted to their amusement.

‘ The Adventures of Don Ulloa in a Voyage to Calicut, soon after the discovery of India by Vasco de Gama,’ will not, perhaps, be considered by some parents quite so unexceptionable. In many parts it may be thought almost too exciting, as the reader is, by the skill of the narrator, carried on in breathless agitation. The work no doubt contains a faithful picture of the manners and customs of the various tribes which the hero is supposed to have visited, while these are not tamely described, but are rather exhibited in scenes arising out of events, which are so vividly depicted, that the author appears as an actor in what is passing, rather than as a narrator of what has passed. This is powerful writing ; but the grave instructor would, perhaps, consider it better qualified to delight the fancy of maturer age. One episode is decidedly objectionable, partaking too much of the nature of a Spanish romance, while the character, whose history it forms, is made in the sequel most inconsistently wicked. The whole, however, is told with such an air of reality, that, most surprising as the adventures are, the reader cannot refrain from thinking that they could not have been so well described if they had not really happened.

MISCELLANEOUS.

FOREIGN.

FRANCE.

EDUCATION IN FRANCE.—The following facts convey an accurate, but not very cheering view of the intellectual state of the lower classes among our French neighbours. The whole number of individuals, whose age rendered them liable to the conscription law in 1830, was 294,975. Of these there were 121,079 who could read and write; 12,801 who could only read; 153,635 who could neither read nor write; and 7,460 with respect to whom it could not be ascertained what was the extent of their attainments. It appears that the schoolmaster has been most successfully at work in the following eight departments:—Out of every thousand young persons, there have been educated, in the Lower Rhine, 164; Seine, 194; Upper Marne, 204; Jura, 209; Upper Alps, 221; Upper Rhine, 229; Upper Saone, 255; and Marne, 254. The reverse of this picture is to be found in the following eight departments:—Out of every thousand young persons, there are wholly uneducated in the Allier, 863; Cher, 821; Finisterre, 794; Morbihan, 791; Dordogne, 780; Nièvre, 774; Côtes du Nord, 761; and Vienne, 729.

CHATILLON ON THE SEINE, JULY 28.—The students of the Royal College, in this town, in anticipation of the approaching distribution of prizes, have solicited a crown of laurel, in lieu of the 250 francs which the town annually assigns for the purchase of books, and which sum they request may be remitted to Poland, for the relief of the sick and wounded patriots. The town authorities, we understand, have directed the money to be accordingly paid over to the Polish Committee in Paris.

GERMANY.

UNIVERSITY OF GÖTTINGEN.—Notwithstanding the political disturbances which broke in upon the progress of our academical labours early in the year, we have at this moment (31st May) 920 students within our walls; and they are thus classed:—

Students in Divinity,	235	.	Natives,	177	.	Foreigners,	58
„ Jurisprudence,	354	:	„	204	:	„	150
„ Medicine,	206	:	„	128	:	„	78
„ Philosophy, &c.	125	:	„	162	:	„	63

HEIDELBERG.—It has been asserted, on one occasion, by Professor Schütz, that since the wholesale expulsions in 1828, the number of students has declined to 300; and, on another, in a recent anonymous pamphlet, published at Spires, that last summer it amounted to 600 only. But we have the contradiction under our eyes: the official enumeration, which was brought out in the beginning of June last, affords the following result. The actual number of students is 923; of whom 247 are subjects of the Grand

Duchy of Baden, and 676 are from foreign parts. The respective faculties to which they are attached are—Theology, 71; Law, 499; Medicine, Surgery, and Pharmacy, 250; Rural Economy, &c., 69; Philology and Philosophy, 34;—total, 923. This return is exclusive of those who are studying the lower branches of surgery. During the winter term, the number was 887.

MUNICH.—There are, during the present academical year, 1,915 students entered for the several courses at this University: 1,702 are Bavarians, and 213 from foreign countries. The number studying divinity, is 493; jurisprudence, 585; political and agricultural economy, 57; physic, 234; pharmacy, 41; and philosophy, 505.—*Munich, 20th July.*

RELIGIOUS OPINION IN THE UNIVERSITY OF MUNICH.—The celebrated Görres, one of the professors in this University, in the course of his preface to the life and writings of Henry Suso, alias Amandus, maintains that St. François d'Assise really hovered in the air on several occasions, and that Thomas of Aquinas did the same thing; moreover, that Lydwidt, the Dutch saint, made a journey into Palestine without quitting her couch; that St. Catherine of Genoa had her incomparable stomach sewn up like a boot, in order that she might fast for forty days; and that when St. John of Alcantara was caught up in an ecstasy during a snow storm, the falling element formed a hanging canopy over his head. Whatever may be predicated of the professor's talents and fame, one thing at least is unquestionable—that his youthful auditory are not likely to fall asleep over his prelections for lack of amusement.

BOHEMIA.—There are twenty-five Gymnasia (or high schools) in this country; seventeen of them are wholly in the hands of the Catholic clergy, and Catholic teachers predominate in the remainder. In these schools so sorely is the scholar vexed with a superabundance of ecclesiastical mummeries, even to the very extortions of the confessional, that it is rare for him to look back upon his scholastic career without a sentiment of loathing. Private tuition is mostly confined to the same agency, and the fruits are the same as in the former instance—lamentably conducive to the spread of religious indifference. Though Prague still boasts her thirteen monasteries and nunneries, the influence of their members lives but in the remembrance of a bygone age: in fact, the sway of the Roman Catholic priesthood, in spite of every effort which they are making, can never be restored in this country.—*Letter from Prague.*

THE PRUSSIAN GYMNASIA.—These public schools are the only seminaries in Prussia which are empowered to grant to their pupils certificates of admission into the universities of that kingdom. All other young men, who are desirous of entering the latter, must undergo an examination in their classical attainments, before a University Board of Examiners, previously to their being admitted to matriculate. The state of these gymnasia appears, by an official return recently published, to have been as follows at the beginning of the winter session, 1830-1831:—

In Prussia Proper, 12 gymnasia, 3197 pupils: (of these there are four at Königsberg, and two at Dantzig.)

In the Duchy of Posen, 3 *gymnasia*, 1063 pupils: (viz. two at Posen, and one at Bromberg.)

In Brandenburg and Pomerania, 23 *gymnasia*, 5752 pupils: (of these there are five at Berlin, one at Frankfort on the Oder, one at Stettin, one at the University of Greifswald, and one at Stralsund.)

In Silesia and Prussian Saxony, 43 *gymnasia*, 9054 pupils: (amongst which there are four at Breslau, two at Magdeburg, and two at Halle.)

In Westphalia and the Rhenish Provinces, 28 *gymnasia*, 4701 pupils: (of which there are two at Cologne, one at Bonn, at Düsseldorf, Coblenz, Treves and Aix-la-Chapelle, Münster, and Minden.

The total number of these schools is, therefore, 109; and that of their pupils, 23,767.

BRESLAU.—We observe, by the official return of the number of students at this University, during the summer term of the present year, that they amounted to 1114; namely, 281 following the courses in theology, according to the Reformed Church; 245 following those in conformity with Roman Catholicism; 316 studying jurisprudence; 114 medicine; 9 rural and political economy, and 149 philosophy and philology. This enumeration does not extend to numbers who have not taken out their matriculation, but frequent the several courses of lectures.

BERLIN, AUGUST 3.—The birth-day of our enlightened monarch was celebrated this day, by a solemn act in the great theatre of the University Building. It commenced at noon, by the performance of a Latin hymn, with instrumental accompaniments. To this succeeded a Latin oration, by Professor Böckh, the rector for the time being, in which he dwelt upon the power and security arising out of the reciprocal affection which should subsist between the sovereign and his subjects, and passed a merited eulogy on the beneficent sway of his Prussian Majesty. Professor Toelcken then read a list of the awards which had been made with respect to the prize-essays sent in by the students, and announced the several subjects prescribed for competition in the year ensuing. The ceremony closed with the performance of a second hymn.

RHENO-PRUSSIA—NATIONAL SCHOOLS.—The official journal for the circle of Düsseldorf, which forms, with the circle of Cologne, the province of Cleves and Berg, and contains a population exceeding 700,000 souls, affords a very gratifying proof of the diffusion of the means of elementary instruction in that quarter. It appears, that during the year 1830, 34 new schools, and 4 residences for masters had been built, and 256 schools and 40 similar residences had undergone repairs. The voluntary donations towards this benevolent purpose had amounted to a sum of 4955 rix-dollars (745*l.* sterling) for that year, which was 400*l.* more than what had been contributed in 1829.

FRANKFORT.—Professor Cousin, in the report which he has published of the result of his inquiries into the state of public instruction in northern Germany, observes, when speaking of Frankfort, that 'this city possesses no school for university education; instruction ceases at what, with us, constitutes the second step,

namely, the class of instruction given in our colleges, or in the German Gymnasia. It is true, there are several scientific and literary institutions in this city, but they are of a description which, in France, are not within the jurisdiction of the Minister of Public Instruction.' They consist of the Institute for Natural History and Physic, which is partly connected with the Society of Natural History; the Institute for the Art of Design, founded in 1799, and organized, by a decree of the senate, on the 10th of February, 1829; the Society of Arts (Kunst Institut), originating in Schaedel's bequest, 13th of March, 1813; the Society of Natural History (die Natur-forschende Gesellschaft), founded the 22d of November, 1817, and comprising a museum of natural history; the Society of Physics, established for promoting the study of physics and chemistry, on the 24th of October, 1824, with which a cabinet of physics, and prelections on the most recent discoveries, are combined; and lastly, the Society for diffusing the Useful Arts, together with the sciences subservient to them, founded in 1816, and under the direction of a president and eight assistants. This society has instituted a Sunday-school for artisans, with gratuitous instruction, and a School of Trades, dating from the year 1828, where evening lessons in linear design, writing, arithmetic, geometry, and formation of style are given. The Schools for the People (Volks-schulen) have this peculiar characteristic, that the children of distinct faiths have distinct schools—a circumstance which does not attach to the Gymnasium. In this way, there is a Jew's school, founded and conducted wholly by Jews; several Catholic schools, under the direction of the Board for Catholic Seminaries and Churches; two schools for boys—the one adjoining the church of St. Mary, and the other near the cathedral; two girls' schools, one of which is specifically appropriated to English females; and three Protestant schools, on each of which the town annually expends 170*l.* These three establishments contain nearly seven hundred children of both sexes. Every child pays a fee of 10 florins (about 22*s.*), and provision is made for the reception of indigent pupils, by means of charitable contributions, so that there is scarcely a child in the town to whom some sort of education is not afforded. Between the Gymnasium and these popular schools there is a species of intermediate seminary (Mittel Schule), for boys and girls, where instruction of a somewhat superior description is given. Every boy pays twenty florins (about 4*s.*) per annum, without, and twenty-five (about 5*s.*) with, lessons in the French language; the girls pay five florins more for being taught such works as are peculiar to their own sex. This institution has met with great success, and contains two hundred and fifty boys, and the same number of girls. It is divided into four classes for each sex, but none of them can be carried beyond a certain number—an arrangement which is not only wise, but highly conducive to the maintenance of good discipline, and the better instruction of each individual pupil.

AUSTRIA.—The groundwork for elementary instruction among the common people was laid in this country (says a Vienna correspon-

dent) at a much earlier day than in most of the European states. At the commencement of the preceding century, there were not more than three children in twenty who enjoyed the advantage of public education; whereas, at the present moment, their numbers are equal to two thirds of all the young persons who are susceptible of instruction. Of this class, there are two millions of individuals in the Austrian states, exclusive of Hungary; and out of these two millions there are nearly one million and a half on the books of the national schools. Deducting the fifteen hundred schools of industry, and girls' schools, as well as the eight thousand supplementary schools (Wieder-hohlungs Schulen) which exist in the Hungarian provinces, there are altogether *thirteen thousand* elementary and superior schools, the average result of which is, that there is one school to every two hundred and seventy-five families, or to every one hundred and sixty-seven children, and the proportion is constantly diminishing. In Austria Proper, there is not more than one child in thirty, and in Moravia and Bohemia not more than one in twelve or thirteen, of such children as are fitted to receive instruction, who is not a pupil in those schools; but in Gallicia, Illyria, and the Veneto-Lombardie provinces, the number is confined to two out of three. This last circumstance originates in the difficulty of finding the requisite funds, no less than in the want of disposition which exists on the part of the parent to educate his children. The government is earnestly engaged in removing the first of these impediments, and so much so, that in the year 1824 alone, forty-nine superior seminaries were opened in Lombardy, and six-and-thirty national schools in the Venetian states.

WÜRZBURG.—Our University has never ceased to flourish, even whilst under episcopal dominion, when the censorship of the press was at its zenith. It rose to its highest splendour when placed for a while under the Bavarian sceptre, in 1803, but declined in a remarkable manner after it became the seat of a grand duchy, when the greater portion of those who had raised it into fame, sought some other scene for their labours. It has recovered slowly since its restoration to a Bavarian sovereign, and has begun to make swifter progress since the commencement of the present reign: for this it stands indebted to such men as Behr, Seufert, Brendel, Wagner, and Cukumus, whose exertions fairly entitle them to some share of the favouritism which is lavished upon Munich. A spirit of scientific inquiry, directed by rational and liberal views, has long been the characteristic of our schools; this has even extended to the monkish confraternity, one of whom, the indefatigable Blank, was the father of our Museum and Cabinet of Natural History, which are excellent in their class. We also possess an admirably selected library of 120,000 volumes, which has been enriched by the munificence of the Prince-Primate Von Dalberg, as well as from the libraries of the suppressed monasteries. The present reputation of this university is, however, mainly attributable to the excellence of its medical establishment, which is extremely well supplied with teachers in all its branches, and by means of an exten-

sive and admirably conducted hospital (the Julius Hospital), enables theory to travel hand in hand with practice. This department of the University is indisputably better endowed, with respect to the range of professional appointments, than any other. At the head of them stand Heusinger, one of the first physiologists and anatomists in Germany; D'Outrepont, a man of distinguished eminence in the obstetric art; Textor, who is one of the clearest demonstrators that ever lectured on the principles or exhibited the practice of surgery; and last, though by no means least, Schönlein, the able conductor and expositor of clinics in the Julius hospital. This latter institution owes its existence to the Prince-Primate Julius, who was justly called 'the Father of his People,' and in the year 1582 raised the University into note by his judicious reforms and splendid benefactions. Before his time, and during the century and a half which had elapsed from its foundation, Würzburg was a mere seminary for Catholic theology and polemics. It is still the favoured high school of the south of Germany for Roman Catholic students, but the character of its pupils is, notwithstanding, of a freer cast than that of its sister universities in Bavaria.—(*From a Correspondent.*)

BONN.—The number of students at this University during the winter half-year, 1830—1831, was 865, of whom 116 matriculated in Protestant, and 271 in Catholic, theology, 231 in jurisprudence, 134 in medicine, and 112 in philosophy.

SWITZERLAND.—The general annual meeting of Swiss scholars, of whom two hundred were present, was held at Zolingen, in the canton of Aarau, on the 5th and 6th of August last. They met in a hall forming part of the Guildhall; it was embellished with the armorial bearings of the twenty-two cantons, and a lady of the town presented the meeting with an altar, which was placed before the president's chair. On the top of this altar stood a trunk of an old tree, from which sprung a sapling, which bore the coats of arms of the several cantons, and in the centre of them the cross of the Swiss confederation was introduced. At the foot of the sapling was a figure of a young woman praying for the prosperity of Switzerland.

GREECE.

SYRA.—In June last, there were two schools in this island; the one for boys, the other for girls. The expense of them is wholly defrayed by the town itself. The teachers are moderately competent for their task; and the number of children whom they have under their care, varies from three hundred to three hundred and fifty.

POLAND.

WARSAW, AUGUST 10.—The Council of this university have opened competitions for the vacant chairs of Mineralogy and the Classics. The candidates are required to send in, on or before the 1st of June

next, for the former, a view of the whole course of Mineralogy in Polish, and for the latter, an explanatory comment on the thirty-third and four following books of Pliny's Natural History, in Latin. No persons will be admitted as candidates who have not taken a doctor's degree. An annual salary of six thousand Polish florins (about 130*l.*) is attached to both appointments.

RUSSIA.

BESSARABIA.—The Emperor Nicholas has directed, that all the public seminaries in this province should be severed from the jurisdiction of the University of Kharkof, and placed under that of the Richelieu lyceum and curator of public schools at Odessa.

SICILY.

THE UNIVERSITY OF PALERMO.—This school is numerously attended, but has slender claims to respect from the scholar or man of science. The Abbate Ferrara, who is accounted a model of learning throughout Sicily, and by the natives the most erudite personage in the literary hemisphere, collects a crowded auditory at his lectures on chemistry and mineralogy, which he delivers, in the same hall where, but a few minutes before, the theological course has been given. Reclining in the chair of divinity, Ferrara delivers his dicta on bases, acids, re-agents, analyses, and precipitates, independently of the aid of chemical apparatus, or the illustration of one isolated experiment. It was amusing enough to see his pupils gazing, with open mouths of astonishment, as he dwelt upon his possessing the means of converting black into white. Every countenance looked as if the owner sighed for the opportunity of witnessing a practical exhibition of the miracle. And this is nothing more than a fair specimen of the state and condition of other branches of science in this university. Professor O*** had commissioned me to purchase every work in Natural History, which had appeared in Sicily during the last thirty years, and I took occasion to consult with the learned Abbate on the subject. After one of his lectures, therefore, and before his numerous auditory had dispersed, he recapitulated, with much pomp of enunciation, the titles of thirteen publications, which had emanated from his own pen. The greater part of them, as I afterwards found upon searching for them at Naples, were mere pamphlets, and those of a very insignificant description. I had previously ransacked the stores of every bibliopolist in Palermo, but could not meet with a single page of the boasted thirteen, save and except the 'Guida de' Viaggiatori in Sicilia!' Indeed my whole literary harvest from this classic soil was limited to a stray number of a periodical, in which Cocco, a young man of considerable attainments in Messina, has described sixteen new varieties of fishes. As for mass-books and works of devotion, it was my own fault that I did not bring a ship-load away with me.—
J. B.

SPAIN.

IN the year 1806, there were two and twenty universities in Spain, which have lately been reduced to sixteen. Of these, three are styled 'Mayores,' namely, those of Salamanca, Valladolid, and Alcala; and the remainder, 'Minores,' to wit, those of Valencia, Cervera, Saragoza, Granada, Seville, Oviedo, Santiago, Huesca, Majorca, Orihuela, Ossuna, and Onate. If the number of schools of science and learning were the measure of a country's mind, Spain ought to be the best informed region in Europe, for she possesses a University to every eight hundred thousand inhabitants. But they are wretchedly endowed; and some of their professors, such as the lecturers on mathematics and philosophy, do not receive more than *four pounds* a year! Salamanca forms the only exception, and there they are in general well paid. Numbers of them contrive to subsist on *five and twenty* pounds per annum; and a scholar who holds a chair which produces from *forty to fifty*, ranks among the favourites of fortune. The professor has, therefore, no earthly motive for exertion in his academical capacity, and endeavours to obtain some second or third appointment, the functions of which are entirely foreign to his university duties. Even at Salamanca, his principal object in accepting a chair is to render the reputation which he may acquire whilst filling it, a means of recommending himself to some official station.

In almost every town in Spain there are salaried schoolmasters, who are employed in giving instruction to the children of the poor; and schools, having a similar object in view, are attached to many of the monasteries. The range of study is limited to reading, writing, the elementary principles of arithmetic, and the catechism.

THE UNITED STATES,

Whose population has increased from *seven* millions, in the year 1810, to *fourteen*, at the present moment, contain 19,000 places of divine worship, or one to every 737 souls, 43 colleges, or lyceums; 30 libraries attached to these colleges, containing 128,118 volumes; and 25 other libraries, possessing 66,730 volumes, in various departments of science and literature. The number of theological seminaries is twenty, and connected with them are as many libraries, which are supplied with 40,000 volumes.

B R I T I S H.

 LONDON UNIVERSITY.—On Wednesday, the 13th of July, a meeting was held for the distribution of prizes and honours in the following classes; the successful competitors received their prizes from the hands of the Chairman, Lord Ebrington:—

LATIN.—**SENIOR DIVISION.**—*First Certificate and First Prize*—William Dougal Christie, of London. *Second Certificate and Second Prize*—John Woolley, of Brompton, Middlesex. **JUNIOR DIVISION.**—*First Certificate and highest Prize*—Alexander Chisholm Gooden, of London. *Second Certificate and Second Prize*—W. G. Pennington, of Clapham Common.

GREEK.—**SENIOR DIVISION.**—*First Certificate and highest Prize*—William Dougal Christie, of London. *Second Certificate and Second Prize*—John Woolley, of Brompton, Middlesex. **JUNIOR DIVISION.**—*First Certificate and highest Prize*—Alexander Chisholm Gooden, of London. *Second Certificate and Second Prize*—W. G. Pennington, of Clapham Common.

SENIOR MATHEMATICS.—**HIGHER DIVISION**—*First Certificate and Prize*—William Aldam, jun. of Leeds. **LOWER DIVISION.**—*First Certificate and Prize*—W. D. Christie, of London.

JUNIOR MATHEMATICS.—**HIGHER DIVISION**—*First Certificate and highest Prize*—Robert Fawcus, of London. *Second Certificate and Second Prize*—Henry Warwick Cole, of London. **LOWER DIVISION**—*First Certificate and Prize*—William Conway, of Kennington Common.

NATURAL PHILOSOPHY.—*First Certificate and highest Prize*—J. S. Chance, of Birmingham. *Second Certificate and Second Prize*—William Aldam, jun. of Leeds.

RHETORIC.—**SENIOR CLASS.**—*First Certificate and Prize*—Charles Z. Macaulay, of London. **JUNIOR CLASS**—*First Certificate and Prize*—John Hedderwick, of London.

ENGLISH PHILOLOGY.—*First Certificate and Prize*—James Thompson, of London.

PHILOSOPHY OF THE MIND AND LOGIC.—*First Certificate and highest Prize*—Frederick Lucas, of Wandsworth. *Second Certificate and Second Prize*—Richard Baxter, of Manchester. Augustus Abraham, of London, and Henry Warwick Cole, also received *First and Second Certificates and Prizes* for Diligence, Ability, and general Excellence.

FRENCH.—**SENIOR DIVISION.**—*First Certificate and Prize*—R. H. Semple, of London. **JUNIOR DIVISION.**—*First Certificate and Prize*—Lord Leicester.

ENGLISH LAW.—*First Certificate and highest Prize*—Edward Hall, jun. of Newcastle-upon Tyne. *Second Certificate and Second Prize*—Henry Udall, of the Inner Temple. *Third Certificate and Third Prize*—Thomas Hare, of the Inner Temple.

BOTANY.—*First Certificate and Prize*—Joseph Douglas, of Bushey, Herts.

NAVAL AND MILITARY LIBRARY AND MUSEUM.—This institution, which has been recently established in London, with the view of improving the scientific character of the naval and military professions, bids fair to prove eminently successful. His Majesty has been graciously pleased to extend his patronage to it, and the Duke of Wellington has been elected Vice-Patron. The establishment of

the institution has been forwarded by the most distinguished officers in the naval and military service, and with so much effect, that within three weeks after issuing the prospectus, a list of 735 subscribers was sent in.

EDUCATION OF THE WORKING CLASSES.—A very numerous meeting of the working classes residing in the Tower Hamlets, took place on the 12th of July, in the grounds of the Ben Jonson public-house, at Stepney, to consider the best means of establishing 'Societies for the Promotion of Public Instruction.' Mr. D. Saul, Fellow of the Geological and Astronomical Societies of London, was called to the chair. Mr. Hume, M.P. addressed the meeting at some length, expressing his hope to see the day when the state, like America and other countries, would make a proper provision for educating every child; but, at present, he recommended the formation of such societies as those now proposed, as a means of diffusing a general and useful knowledge, and of bettering the condition of the labouring classes. Several resolutions were then passed, and a collection made for the purpose of carrying the object of the meeting into effect.

MESSRS. SMITH AND DOLIER.—In the last Number of this Journal there appeared a review of one of Messrs. Smith and Dolier's publications, which, in the opinion of the reviewer, possessed considerable merit. Some remarks were also incidentally made, in the same article, on Messrs. Smith and Dolier's various inventions for facilitating the acquisition of knowledge. As these remarks appear to some to convey a general and sweeping censure, we take this opportunity of saying, that such a kind of censure was not intended, either with respect to Messrs. Smith and Dolier's past or future inventions. We shall endeavour, at some convenient time, to describe particularly the various inventions alluded to, and accompany the description with such remarks as we shall believe to be fair and true.

BRISTOL COLLEGE.—The Rev. W. D. Conybeare, Visitor of Bristol College, has lately delivered an inaugural discourse at that institution, introductory to a series of Theological Lectures for the use of the pupils. The subject of the address is the application of classical and scientific education to Theology, and is treated with much learning, ingenuity, and elegance.

WORCESTER.—The Mechanics' Institute, which was founded by Dr. Corbet, about three years ago, is now entirely out of debt, and in far more flourishing circumstances than ever. Its career has not been brilliant (for there has been no extraordinary expence), but it has been sure. What has ruined four-fifths of similar institutions is, getting involved in debt: making a very brilliant commencement, they get embarrassed, and every one's zeal is cooled.

LEEDS SCHOOL OF MEDICINE.—A School of Medicine has been established at Leeds, and is to open on the 25th of October. Several respectable physicians and surgeons have undertaken to deliver courses of lectures, for the benefit of students.

DISSENTERS' SCHOOL.—At Silcoats, near Wakefield, in Yorkshire, an institution has been established for the purpose of providing an adequate education, at a cheap rate, for the sons of Dissenting Ministers, of the Independent denomination, in Yorkshire and Lancashire. The head master, who has been recently appointed, is the Rev. Ebenezer Miller, A.M. of the University of Glasgow, and formerly classical tutor of the Blackburn Independent College.

BOTANY.—A Botanic Garden has been established at Manchester, and is already so far advanced as to afford great facilities for extending improved varieties of culinary vegetables and fruits, and for the education of a superior description of gardeners. The gentlemen of the neighbourhood have been most liberal in their support of this establishment, to which very considerable donations of trees, plants, and books have been made.

MILITIA SCHOOL.—In the Cavan Militia a school is established for the education of soldiers' sons. They are taught to read and write, and the common rules of arithmetic: they are instructed in the principles of the Christian religion, and the duties of morality; are paraded with the men every Sunday, and marched with them to their respective places of worship. On Saturday the master has the boys prepared for examination, and any officer who chooses to attend may examine them. They are furnished with a leather cap, a jacket, and two pairs of cloth trousers annually. The expense of this establishment is defrayed by a very trifling subscription among the officers, in the following proportions:—field-officers, 8s. per month; captains, 6s.; lieutenants, 3s.; ensigns, 2s.; and with this slender fund they are enabled to clothe and educate forty boys.

SCOTTISH UNIVERSITIES.—The following is the number of degrees granted by the Scottish Universities for the last thirty-one years:—

		D.D.	LL.D.	A.M.	M.D.
Edinburgh	.	46	27	199	2524
Glasgow	.	87	72	760	654
St. Andrew's	.	69	6	59	649
Aberdeen	.	26	59	740	286
Marischal	.	51	50	881	282

Glasgow Chronicle.

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ERRATA.

- Page 284, line 29, for 'urged,' read 'used.'**
- Page 294, last line, for 'two,' read 'these.'**
- Page 287, first line, for 'observations,' read 'operations.'**
- Page 289, line 4, insert 'a more' after 'is.'**
- Page 290, line 16, for 'action,' read 'notion.'**
- Page 290, fourth line from bottom, for 'thing,' read 'theory.'**

